Skills Beyond School

Hyung Man Kim · Cheonsik Woo
Kirak Ryu · Seok-young Oh
Foreword

The OECD member countries, and the Korean government, recognize that forming and improving skills is critical to achieving sustainable economic growth. Moreover, advanced countries are increasingly placing more importance on high-skills development to enhance their global competitiveness in the wake of the global financial crisis. Indeed, skills development will be increasingly important to strengthening a nation’s competitiveness in the future. As such, the OECD and KRIVET have collaborated on a joint research project since last year that deals with the issue of advancing skills development in post-secondary vocational education and training (VET). This joint research project aims to identify the future changes and new challenges in VET that countries will likely confront, and to draw policy implications. The primacy of this collaborative research on post-secondary VET is to ensure sustainable growth and development for countries, and to find new policies for skills development by studying issues in post-secondary VET.

KRIVET shares the importance the OECD EDU places on skills development in the post-secondary VET. In this regard, the research collaboration on post-secondary VET between the OECD EDU and KRIVET was launched in 2010. During this process, a joint international seminar was hosted by KRIVET and OECD at the OECD headquarters in Paris, France, on November 17, 2010. Also, the results of the joint research study were presented by both organizations at the 6th Group of National Expert Meeting on January 10 and 11, 2011. Subsequent to this, the OECD, and 16 member countries, have been working on the SBS project on “Programme of Work and Budget 2011-12” based on the results of the OECD-KRIVET research collaboration. KRIVET has been representing Korea in the SBS project. The SBS project supported by the OECD Directorate for Education (EDU) will focus on the country case studies of participating countries, which will help shape each of the country’s research. The OECD’s work on building country studies was launched on February, 2011, which will include each country’s on-site research along with research analysis.

This report is focused on the programmes and institutions at Junior Colleges and Polytechnic colleges within Korea’s post-secondary VET, as defined according to OECD guidelines established under the SBS project. The key contents of the analysis center on access route, funding and governance, qualification framework, teaching, career guidance, quality assurance, and so on. The framework of the analysis is to determine how skill formation in post-secondary VET can be aligned with the needs of the labour market. In the process, the study tackles the policy issues and challenges confronting post-secondary VET in Korea, and derives policy suggestions to address these issues and challenges based on the analysis. The study analyzes six challenges and five policy issues to assist policy makers frame the policy debate and to address the changing environment in Korean post-secondary VET.
This project was led by Dr. Hyung Man Kim, with Dr. Cheonsik Woo acting as an advisor. Other contributors of this project include Dr. Kirak Ryu, Dr. Seok-young Oh, and Kyung Hee Yoon who was the research assistant. This project was carried out in partnership between the OECD EDU/ETP and KRIVET, in collaboration with Deborah Reseavere (Head of Education and Training Policy Division in OECD EDU) and Simon Field (the OECD team leader for SBS project). In preparation of the policy recommendations to be presented in the final report, Simon Field and Viktoria Kis, members of the OECD research team, visited Korea twice. At that time, policy makers and key stakeholders took part in the discussions and provided interviews in relation to Korea’s post-secondary VET. I commend all of the participants for their hard work and effort in completing this project.

Finally, the opinions expressed and arguments employed herein do not necessarily reflect the official views of KRIVET.

2011. 12

President, KRIVET
Young-Bum Park
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Executive Summary

Overview and Objective

This report provides an overview of the findings from the country-based case study of Korean post-secondary VET as part of the “Programme of Work and Budget 2011-12” under the OECD Skills Beyond School (SBS) project carried in 2010. It was a collaborative effort between the OECD and KR IVET, which recognize the growing importance of skills for economic and social development. Both organizations have been interested in examining the role of post-secondary vocational education and training (VET) in skills development. Thus, this project studies Korean post-secondary VET in general based on the pilot research carried out by OECD-KRIVET.

The overall aim has been to develop an analytical framework and case study of Korea’s post-secondary VET with two objectives in mind, as part of the OECD’s country review. The first objective was to analyze and diagnose the issues and challenges faced by Korean post-secondary VET, and to suggest policy remedies to address them. The findings of the research study are presented as part of the OECD SBS project. Moreover, it is hoped that the study can also present an alternative view on the linkage between post-secondary VET and the labour market. This is guided by the recognition that Korean post-secondary VET can play a positive role in economic and social development. The second objective is to support the efforts of the OECD to present policy recommends on post-secondary VET based on a study of Korea’s post-secondary VET and the labour market. It is hoped that the policy implications of the research study can assist Korean policymakers in formulating policies on Korea’s post-secondary VET.

Scope of Post-secondary VET

The Korean education system can be classified into five groups: compulsory education (elementary and middle school), upper secondary, post-secondary, undergraduate, and graduate. Korean vocational education can be classified by two types within upper secondary schooling: VET and post-secondary VET. Upper secondary VET includes vocational high schools, and post-secondary VET includes junior colleges, polytechnic colleges, and others. Lastly, tertiary education includes post-secondary VET as well as undergraduate and graduate higher education.

On the other hand, the OECD defines post-secondary VET based on the characteristics of a programme and institution. According to the OECD’s definition, post-secondary programmes are one year or more in length, and go beyond upper secondary level (ISCED 4, 5 and 6). The majority or teaching takes place in post-secondary vocational institutions.

According to the OECD’s definitions, Korea’s post-secondary VET can be classified as junior colleges and polytechnic colleges, which account for 21.5% of total
students enrolled in tertiary education. In particular, there are a total of 145 junior colleges, which account for 21% of total students enrolled in tertiary education.

Key findings

The study focused on three areas of Korean post-secondary VET: the structure and operation of post-secondary institutions, and the linkage between VET and the labour market.

The following discusses the structure of post-secondary VET and the formation of skills in Korea:

- In Korea, post-secondary VET is comprised of private instructions. Since 1980, Korean tertiary education has rapidly expanded. However, its size is decreasing based on the declining number of students and institutions due to the declining school age population. In 2011, 94% of the junior colleges were private.
- The number of students per faculty in junior colleges is high, relative to universities. Moreover, only 53.8% of the total faculty members teach full-time. In particular, the number of students is decreasing in junior colleges, while the number of students in universities continues to increase. Also, the share of students that temporarily discontinue their education is very high at about 35%. This suggests many students in junior colleges transfer to universities.
- The number of programmes increased from 3,741 in 2006 to 5,446 in 2010, which was caused by the efforts of institutions to offset declining enrollment rates by attracting more students, which has been declining due to the shrinking school age population. Moreover, many junior college institutions merely changed the names of their programmes to attract more students.
- There is an excess of post-secondary VET programmes while the drop-out rate remains very low. Thus, this has led to a high completion rate, which suggests that students can easily acquire an associate degree at junior colleges.
- On the other hand, Korea’s employment rate been gradually declining, which has made it difficult for graduates to find a job after completing post-secondary programmes. In particular, students not from Seoul experience difficulty in finding jobs after graduating. Also, the employment rate is higher among graduates of polytechnic colleges than junior colleges.

The following chapter discusses the operation of post-secondary VET in Korea, which is not only affected by the institutions themselves, but also the government and other stakeholders.

- In Korea, there is a lack of an overarching, umbrella organization in the governance of post-secondary VET. The organizational authority of decision-making and policymaking on post-secondary issues is fragmented among several ministries, as well as employers or trade unions, which mostly do not take part in the organization. Employer groups or trade unions are not involved in the board of an education foundation. In particular, the steering function is very closed in the operation of private junior colleges.
- In 2008, the amount of public expenditure spent on education per student in Korea was lower than the OECD average, while education expenditure as a percentage of
GDP was the second highest among OECD countries. As such, a high portion or 77% of the education cost is funded by private tuition. Direct expenditures to institutions account for 85.2% of public subsidies in the form of financial aid to students. The scholarships and loans to students account for most of the remaining subsidies. As such, the system of scholarships and loans is very weak in Korea, though they have been increasing rapidly of late driven by government support. Also, the government has been trying to improve the funding scheme’s formula to ensure quality and not just quantity. In general, the burden of paying for the cost of education in junior colleges is mostly shouldered by students or their families, while the cost of education in polytechnic colleges is mostly paid by the government.

- In Korea, the quality assurance system is very weak. The Korean Council for College Education (KCCE) oversees accreditation with relation to quality or performance of junior colleges. Also, polytechnic colleges only have an index to conduct a self-assessment of their campus and programmes. The information infrastructure to support a quality assurance system is not only weak, but the function of collecting relevant data to support the quality assurance infrastructure is also weak.

- On the whole, workplace training is very weak in Korean post-secondary VET, though it is relatively better in polytechnic colleges compared to junior colleges, which have poor programs. Moreover, the linkage between government, employers, trade unions, and other social group that make up the “social partnership” critical to facilitating post-secondary is also inadequate.

The study also tries to better understand the linkages that connect post-secondary VET and the labour market, which are closely linked by other systems such as information, qualification, skills standard, and career counseling. The links that facilitate this connection is discussed in following manner:

- The information infrastructure that links VET and the labour market include the collection and dissemination of data that has been processed. In Korea, there are the three sources of data including surveys of tertiary graduates, the Graduate Occupational Mobility Survey (GOMS), and the Panel Survey for the Youth Population. However, these surveys still do not provide adequate information about post-secondary VET. In Korea, a report called the “Future of the Job World” is published by KRIVET every year. This report provides information on jobs by giving job profiles and relevant study programs in tertiary education. However, the report fails to provide information that links a specific job to a specific study program. Overall, the collection and dissemination of information is weak.

- The system of qualification links VET and the labour market. In Korea, there are two types of qualification: degree and vocational qualification. A degree is given to a student that completes a programme at a junior college and polytechnic college, while a vocational qualification is given to students that did not complete a programme in post-secondary VET. Vocational qualification is separated based on the relevant curriculum in post-secondary VET programmes.

- The system of delivering skilled workers between VET and the labour market is closely tied to the National Competency Standard (NCS) in Korea. The NCS is a
collaboration between government and industry councils. However, industry councils and employers only play a small role in post-secondary VET. Most importantly, the NCS itself, a government agency, is not used in post-secondary VET programmes. As such, the development of the NCS is an on-going project.

Lastly, career guidance at schools is mainly focused on counseling students on applying to higher education institutions, while career development is more focused on ensuring employment security among adults rather than providing vocational counseling. The administering agencies of career development, the MEST and MOEL, have a weak collaboration with relation to career guidance and the use of information.

Policy Issues and Challenges

As discussed above, the Korean post-secondary VET confronts many issues and challenges, which can be summarized in the following:

- Due to the traditional seniority based compensation system in Korea, the skills acquired in post-secondary VET institutions are not sufficiently compensated in the form of higher wages or job promotion.
- The system of quality assurance is very weak in the education and training institutions. As such, the student’s practice in the industry or workplace is very poor.
- Many junior colleges are pursuing academically-oriented programmes instead of delivering vocational education as they were intended. There is a growing recognition among many graduates that they need to enroll in a four year university. The correlation between getting a junior college education and finding a job is weak.
- The NCS and vocational qualification system are not aligned well with the curriculum of junior colleges. Many junior college graduates enter into the labour market without vocational qualification after graduating, even with an associate degree.
- In Korea, the system of implementing post-secondary VET policies is weak, while the agencies related to post-secondary VET do not participate in the policymaking process. Moreover, employers and trade unions should not be involved in planning or decision-making of policies. Due to the large number of private junior colleges, government policy efforts fail to achieve their policy goals in VET and in the labor market.

Korea’s policy issues and challenges can be explained within the framework of post-secondary VET, the labour market, and economic social conditions. Based on the findings of the study, the following policy recommendations are suggested:

- Re-establishing the quality assurance system in junior colleges by promoting the participation of employers on the board of an educational foundation, expanding the formula-based funding scheme, strengthening the linkage between job training
and the NCS (national competency standards), and so on;

● Strengthening the connection between VET programmes and qualification system based on the NCS.

● Enforcing the delivery of job related training at post-secondary VET institutions to address the skills mismatch or skills gap in the labour market;

● Establishing a single, umbrella organization to coordinate all of the government agencies, VET providers, employers or employer groups, trade unions, and NGOs.

● Improving the information infrastructure by strengthening data collection and dissemination, enhancing career counseling, and so on.
Introduction

1. Background

Korea has undergone rapid social and economic transformation, going from having had a surplus of labor to now having a shortage of labor. This has been a result of Korea’s rapid economic growth and development. Since the early 1960s, the Korean government has been promoting economic development based on a series of five year economic development plans. Korea’s growth strategy has been driven by government and business that has transformed Korea’s economy, from an agricultural based economy into a manufacturing and service based economy. This has resulted in an export boom of increasingly high-tech and high value-added goods, most recently in the information and communication technology sectors. During this development process, education played an important role in human capital development and thus meeting the needs of industry. It has been called “the education miracle” (OECD 2009b). Korean society has traditionally put great importance on education as a way of achieving social status. If young Koreans and their families had not invested heavily in education, particularly through private tutoring, then the education miracle could not have happened.

However, Korea now faces a sharp rise in educational attainment which has gone from very low levels to levels that now exceed those of many OECD countries. Among OECD countries, Koreans in the ages of 25-to-34 year old now have the highest completion rate and the third highest enrollment rate in tertiary education (OECD 2009b). Indeed, Korea’s economic and social development was made possible by its human capital. However, there has been a paradigm shift in Korea’s development of human resources driven by changing labour market needs and by new economic and social environment. The labor market’s institutional arrangement for the formation and allocation of human resource influences the demand for and supply of skilled workers. Against this background, post-secondary vocational education and training (VET) can play an important role in the development of human resources with high-skill or creative skills. Until ten years ago, human resource development based on uniform or standardized skills was sufficient for Korea’s economy. However, the labour market now demands more diversified or sophisticated skills, as the economy becomes more knowledge based. As such, Korea’s economy needs skilled workers with high-valued skills as well as standardized skills.

Skills beyond school is mainly targeted at post-secondary vocational education and training. OECD countries recognize the importance of skilled workers in enhancing industrial productivity and social cohesion. Many of the unskilled jobs previously found in OECD countries have quickly disappeared due to new technology. In light of this, OECD countries need to compete in providing high quality goods and services. Here, post-secondary VET can play an important role in addressing the skills mismatch in the labor market and achieving sustainable economic growth. Indeed, post-secondary VET can play a central role in preparing young people for work, developing the skills of older workers, and responding to the labor market needs of the economy.
The Korea Research Institute for Vocational Education and Training (KRIVET) also recognizes that post-secondary VET can play an important role in skills development for sustainable economic growth. Since 2010, the OECD and KRIVET have pursued a joint research study to assess the issues in post-secondary vocational education and training (VET) for improving skills development. This joint research aims to identify future changes and challenges in VET that each country may potentially confront. In the process, it is hoped that appropriate policy implications can be drawn to cope with the new changes and challenges. The basis of this research lies in the belief that post-secondary VET can be an impetus to sustainable growth and development. As such, one of the main objectives of the study will be to identify new ways for skills development within VET. Moreover, the study aims to identify how post-secondary vocational education and training can contribute to strengthening economic competitiveness. Based on our work, we were able to confirm that many OECD countries are indeed interested in policies for skills development within post-secondary VET as a way of enhancing national competitiveness.

During the joint-research process in 2010, KRIVT and OECD co-hosted an international seminar at the OECD headquarters in Paris, France, on November 17. The research results of the joint study were presented at the 6th Group of National Expert Meeting on January 10 and 11, 2011, which provided a great chance to initiate the OECD’s 2011 Skills beyond School (SBS) based on the results of the study. Under the SBS project, the OECD began the “Programme of Work and Budget 2011-12” in January 2010. Now, 16 OECD countries are taking part in this project. The 2011 SBS project has been supported by the OECD Directorate for Education (EDU). It has focused on promoting country based case studies to help shape each of the country’s research. This country based research approach began in February 2011. It is expected to result in country specific research along with analytical research. After the OECD SBS project was launched, the development of high-level skills through post-secondary VET has been considered as a key means of supporting economic growth. The principal objective of the SBS project is to assist countries understand how the organization, management and delivery of post-secondary VET can help them achieve their economic and social objectives.

2. Objectives and Research Themes

This project has two objectives. First, it aims to analyze and diagnose the issues and challenges in post-secondary VET as well as to suggest policy recommendations to overcome these challenges in the context of Korea’s post-secondary VET. This research study is being conducted as a background to the OECD SBS (skills beyond school) project. Moreover, it is hoped that a new possible alternative on the linkage

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1 A total of eight countries including - Austria, Egypt, Denmark, Germany, Korea, Switzerland, and United Kingdom, and United State, - are participating in preparing background reports as well as country reviews. The countries that will provide country commentaries include Belgium, Canada, Israel, Romania, and Spain. Background reports will be prepared for Iceland, Mexico, and France.
between post-secondary VET and the labour market can be presented as a result of this study with the ultimate goal of suggesting new policy direction for Korean post-secondary VET, which plays an important role in economic and social development. Second, the research study aims to support the efforts of the OECD to draw general lessons on post-secondary VET and the labor market based on the analysis of Korea’s experience. It is hoped that the findings of the research study will contribute in driving policy in relation to post-secondary VET in Korea.

To this end, the following sets of questions regarding the current state of Korean post-secondary VET need to be addressed:

- How does post-secondary VET fit within overall tertiary education arrangements?
- How do various public and private funding mechanisms affect what VET programs students choose, what providers offer, and the overall resulting skills mix?
- What is the interface between post-secondary VET provision and qualifications?
- What quality assurance mechanisms are relevant to post-secondary VET?
- How can labor market relevance of study programs be assessed?
- To what extent, and how, can workplace learning be integrated with study programs?

These questions are aimed at examining how the following can be achieved: identifying an effective institutional framework, ensuring a better match of supply and demand for skills, and improving the quality of education and access to education and its completion. Institutional frameworks that support funding and governance are becoming more complex and dynamic. The effectiveness of post-secondary programmes in VET is affected by governance and funding systems as well as institution’s strategy, etc. Also, improving the quality of education, making access more equitable access, and raising completion rates in post-secondary VET are related to making sure the supply and demand of skills match in the labour market. The questions driving this research study aim to better understand and contribute to the literature that examine issues on skills formation in post-secondary VET as well as the supply and demand of skills match in the labour market.

3. Research Approach and Methodology

In addressing these questions, this study follows the standard methodology established by the OECD Skills beyond School project on post-secondary VET in Korea. The research deals with a deliberately limited set of issues related mainly to initial post-secondary VET. The topics addressed were agreed with the OECD project team, and limited to issues on which the study could draw on international experience or could otherwise add useful value to the domestic policy debate. Also, the review takes place at a time when education initiatives in Korea aim to make post-secondary VET more effective and more responsive to industry needs. The review draws on domestic evidence and experience in order to assist the OECD Team’s analysis.
4  Skills Beyond School

This research project applies three methods for finding and analyzing the stylized facts in Korean post-secondary VET. The first is statistical analysis with relation to post-secondary VET and the labour market. Statistical analysis studies the current position and trends over past years. The statistical analysis serves as the basis for arguing the causes and shedding light on the points that form the stylized facts. Most of the statistics is drawn from official publications. However, unofficial statistics have been compiled through further investigation and examination of internal data gathered from relevant institutions.

The second method applies interviews with stakeholders and policy-makers. The interviews were conducted via visits to institutions and meetings with specialists during the period in which the OECD delegate of experts made their preparatory and policy visit. Post-secondary VET policies are set by government officials of ministries. Interviews with policymakers were conducted for two hours over a total of five times. The interviews focused on governance and funding in relation to post-secondary VET, and the systems that link VET and the labour market - such as qualifications, degree, and workplace training, etc.

The third method used was the organization of two seminars that were attended by experts. During the seminars, the problems and issues in Korean post-secondary VET and the labour market were discussed with OECD and Korean experts. KRIVET researchers sought the views and opinions of Korean experts on the issues confronting post-secondary VET and the labour market. Lastly, the findings of the research study on Korean post-secondary VET was discussed with OECD and Korean experts during the visits by the OECD delegation. The issues and challenges confronting Korean VET were discussed comprehensively.

4. Structure of the Report

This report focuses on the programmes and institutions of junior colleges and polytechnic colleges within Korean post-secondary VET, according to the OECD’s definition under the SBS project. The key elements of the report discussed include access route, funding and governance, qualification framework, teaching, career guidance, and quality assurance and so on. Based on the findings of the study, the report outlines the issues and challenges confronting Korean post-secondary VET, and draws policy lessons to overcoming them. It is hoped that the policy implications of the study will help policymakers in formulating policies for post-secondary VET.

In Korea, vocational education and training faces new challenges. A growing number of young people now expect to obtain tertiary education and post-secondary VET. To reflect this new reality, such programs must be designed not only to prepare students

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2 OECD experts and KRIVET researchers visited four institutions such as MEST (Ministry of Education, Technology and science), MOEL (Ministry of Employment and Labor), MOSF (Ministry of Strategy and Finance), and Osan Junior College. The team meets nine stakeholders from the following institutions Polytechnic College, Korea Council for College Education, Korea Council for University Education, Korea Employers Federation, Korea Chamber of Commerce & Industry, Korean Confederation of Trade Unions, Federation of Korean Trade Unions, Korea Federation of Small and Medium Business, and Korea Foundation for the Promotion of Private School.
for the labor market, but also for entry into tertiary education. This means that sufficient attention needs to be put on promoting general academic skills as well as practical skills. This report will examine the changing relationship between academic education and vocational education in post-secondary.

This report is composed of five chapters. Chapter Ⅱ assesses the present conditions of Korean education as well as reviews the OECD definition for post-secondary education. This chapter is presented in three sections. The first section presents macro statistics related to the number of schools and students by private and public institutions. The second section reviews the OECD definition and defines the scope of post-secondary education. The final section discusses the scope of post-secondary VET in Korea according to the OECD definition.

Chapter Ⅲ is divided into four sections that analyze the structure of post-secondary VET in Korea. In the first section, statistical data on Korean post-secondary education is reviewed. The second section examines key elements of post-secondary VET programmes. The third section discusses the trends of high student enrollment and completion rates. The final section discusses the employment prospects of post-secondary VET graduates.

Chapter Ⅳ has four sections that analyze the operation of post-secondary VET in Korea. The first section assesses the governance structure of post-secondary VET institutions and the role of government within this structure. The second section analyzes the funding system and incentive structure in post-secondary VET. The third section discusses the challenges in ensuring quality assurance. The final section assesses on-the-job training and social partnership.

Chapter Ⅴ has four sections dealing with the linkage between VET and the labour market. The first section discusses the present state in regards to information in post-secondary VET and the labour market. The second section examines the qualification system as a means of matching skills between VET and industries. The third section discusses the delivery of skills from the perspective of the VET programmes and industry. The fourth section discusses the challenges in improving career counseling.

Finally, Chapter Ⅵ frames the policy debate based on the results of this report. The key issues and challenges in Korean post-secondary VET are presented, and general policy lessons are offered.
II. Post-secondary VET in Korea

1. Korean Education System

Korea’s education system has been geared towards the education of school age population for children or the youth for a long time. It is based on a system of 6-3-3-4: six years of primary education, three years of middle school, and three years of high school, followed by two or four more years of college and university. At the end of compulsory education or the completion of middle school, virtually all students enter into high school for upper secondary education. Both elementary school and middle school are by legal statute compulsory. After graduating from middle school, nearly 99.9% of the graduates enroll into upper secondary school. In Korea, all Koreans remain in school throughout their school age population. Also, almost all graduates advance to an upper grade school.

Upper secondary school lasts for three years and caters to 15-to-17-year-olds. Schooling may take place in a general high school, a vocational high school3, or various other types of schools. This last type of school accounts only for around 1% of students in upper secondary school. Most of the upper secondary students attend a general high school, which accounts for 75.5% of total students. Meanwhile, vocational high schools account for 23.5% of total students. Upper secondary high schools are academically-oriented, as most of the students go on to enroll in tertiary education. In contrary, students of vocational high schools are expected to enter the workforce after completion. Vocational high school programmes put higher weight on practical or job-oriented education and training rather than academic education and training. However, most vocational high school graduates tend to enroll in tertiary education instead of entering the workforce.

In Korea, vocational education institutions include vocational high schools, junior colleges, and polytechnic colleges. Except for junior colleges and polytechnic colleges, vocational education in higher education institutions is very ambiguous. On the other hand, tertiary education is offered through post-secondary VET, undergraduate, and graduate courses. Most tertiary education institutions are composed of junior colleges and universities in Korea. Undergraduate courses in tertiary education are usually not always only academic programs, but they also confer to graduates that complete a program. Except for polytechnic colleges, the tertiary education system is entirely controlled by the Ministry of Education, Science and Technology (MEST). MEST sets policies on matters such as student enrollment quotas, qualification criteria of faculty and instructors, curricula and degree requirements.

3 In order to make VET high schools more attractive and to encourage students to enroll in VET, the Korean government changed the name of ‘vocational high schools’ to ‘professional high schools’ in April 2007. Alongside the change of the name the Ministry of Education, Science and Technology (MEST) facilitated the entry of professional high school graduates to colleges and universities (OECD, 2009). After that, the Korean government changed the name of ‘professional high schools’ to ‘specialized high schools’ in 2011, as well as named ‘23 institutions of specialized high schools’ to ‘Meister School’ to upgrade the quality of upper secondary VET from 2008.
In 2010, Korea had a total of 177 universities offering four year programs with 2,028,841 students enrolled. It also had 145 junior colleges and 767,087 students enrolled in two to three years programs. Polytechnic colleges are considered post-secondary VET, except for undergraduate level courses such as general universities. Polytechnic colleges were classified as “vocational education,” but as schools at the tertiary level. In 2010, there were 2,318 institutions and 1,981,887 students enrolled in upper secondary schools. Also, 41.5% of these institutions are private with 44.8% of the students, while 97.2% of the students in junior colleges are in private institutions. Also, Korea had 11 polytechnic colleges with 15,000 students. This means that most of the students taking upper secondary courses (about 76%) are entering universities in Korea.

Table 2.1 General Status Of Schools (as of 2010)

<table>
<thead>
<tr>
<th>Classification</th>
<th>No. of School (% of the Private)</th>
<th>No. of Student (% of the Private)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary School (year 6)</td>
<td>5,855(1.3%)</td>
<td>3,299,113(1.3%)</td>
</tr>
<tr>
<td>Middle School (year 3)</td>
<td>3,140(20.9%)</td>
<td>1,979,456(18.1%)</td>
</tr>
<tr>
<td>Upper Secondary Course (year 3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General High School</td>
<td>1,561(42.5)</td>
<td>1,496,227(44.5%)</td>
</tr>
<tr>
<td>Vocational High School</td>
<td>692(40.8%)</td>
<td>466,129(47.3%)</td>
</tr>
<tr>
<td>Others</td>
<td>64(25.0%)</td>
<td>19,512(7.8%)</td>
</tr>
<tr>
<td>Total</td>
<td>2,318(41.5)</td>
<td>1,981,887(44.8%)</td>
</tr>
<tr>
<td>Post-secondary VET Course (year 2-3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Junior College</td>
<td>145(93.8%)</td>
<td>767,087(97.2%)</td>
</tr>
<tr>
<td>Polytechnics</td>
<td>11(0.0%)</td>
<td>15,000(0.0%)</td>
</tr>
<tr>
<td>Others</td>
<td>4(100%)</td>
<td>5,422(100%)</td>
</tr>
<tr>
<td>Total</td>
<td>160(87.5%)</td>
<td>787,509(88.0%)</td>
</tr>
<tr>
<td>Undergraduate Course (year 4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>University</td>
<td>179(84.9%)</td>
<td>2,028,841(78.9%)</td>
</tr>
<tr>
<td>Others</td>
<td>43(65.1%)</td>
<td>526,175(31.7%)</td>
</tr>
<tr>
<td>Total</td>
<td>222(81.1%)</td>
<td>2,555,016(69.2%)</td>
</tr>
<tr>
<td>Graduate Course</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate School</td>
<td>1,138(81.0%)</td>
<td>316,633(69.7%)</td>
</tr>
</tbody>
</table>


2. Definition and Scope of Post-secondary VET

It is difficult to derive an exact definition of post-secondary VET, and their scope of activities, since it can come in many shapes and sizes. A cross country review shows that vocational education and training above secondary schooling is generally characterized by a diverse range of institutions and programmes of varying lengths,
fields and modes of study. But these diverse forms of VET delivery often have similar objectives; in that, these institutions and programs seek to prepare people for careers in higher level technical, professional and managerial positions. One aim of the review is to ensure sufficient breadth in defining its scope to compare radically different modes of vocational education that yield equivalent competencies, and similar jobs and careers. On this basis, it will be possible to compare different experiences and to explore policy options for better delivery. The study seeks to provide a sufficiently broad scope to encompass diverse post-secondary VET systems, while allowing for meaningful comparability. The OECD’s guidance under the SBS project defines programmes and institutions of post-secondary VET in the following:

- **Post-secondary vocational programmes** of one year or more (full-time equivalent) in length, beyond upper secondary level (ISCED 4, 5 and 6) leading to recognized qualifications. They would be vocational in that they are designed for, and typically lead to, a particular job or type of job. They would therefore include, for example a one year diploma in engineering, a two year associate degree in dental hygiene and some professional bachelor degrees – for example a four year programme in food science. The study would not be concerned with programmes in the arts and science providing a general educational preparation. Post-graduate programmes, requiring a previous qualification at bachelor level would also be excluded.

- **Post-secondary vocational institutions** where the majority of teaching is on post-secondary vocational programmes as describe above. These would include, for example, community colleges in the United State, polytechnics in Finland, junior colleges in Korea, technical and further education (TAFE) in Australia, instituts universitaires de technologie (IUTs) in France, and Fachhochschulen in the Germanophone countries.

This definition offers a broad guide for conducting a comparative analysis. At the same time, as with all definitions designed for many countries, it may not effectively capture important programme level and institutional boundaries in some countries, either because some nationally very relevant programmes lie outside this definition (for example, short programmes) or because there are important distinctions within the definition (for example between tertiary and non-tertiary programmes). To reflect this point, individual country studies, including country reviews, will be handled flexibly so that their scope can be narrower than the primary definition, and they may also address programmes outside the core definition, subject to the need to preserve comparability with other reviewed countries.

Across countries, the diversity of approach to delivery is very much part of the subject matter of the study, and as part of the review exercise, a classification of different types of post-secondary VET will be drawn up – showing for example shorter programmes, bachelors programmes, professional examinations. This classification will both help to clarify the dimensions in which countries differ, and offer a framework to identify any limitations of international comparison. As an initial step in
this exercise, key programmes and institutions responsible for delivering post-secondary VET will be identified in OECD countries.

As OECD makes clear in the guideline for SBS project, policies specifically targeted at such programmes and the associated institutions would be the prime target of the review. In addition, the review would examine policies which, while not specifically targeted at vocational programmes, have significant bearing on them – for example government financial support of tertiary education. Also, the OECD’s guideline addresses specifically only a subset of such programmes and institutions, according to the particular policy priorities of the countries concerned.

3. Topology of Post-secondary VET

The Korean VET system is part of a system of education which has achieved huge advances in a very short time. Educational achievement and attainment levels are now among the highest in OECD countries. At the same time, the rapidity of change has presented the Korean post-secondary VET system with some very significant challenges. These challenges have been made more acute by the fast decline of Korea’s school age population and by rapid changes in the skill needs of the labour market. In Korea, post-secondary VET has evolved in a way that ties it together with academically-oriented schools. In fact, students are easily able to move from a vocational school such as a junior college to an academic school such as a university within the system of tertiary education.

In Korea, skills formation in post-secondary VET can be classified under two types: programs for young people receiving their initial education, and programs for adults. The initial education includes formal education and training in junior colleges and polytechnic colleges that mainly target young people. There are programmes and institutions for adults within tertiary education and lifelong learning. Based on target the group and age, post-secondary VET can be separated into two parts: formal and informal education. Formal education targets students that are in the school age population and have graduated high school. Informal education targets adults with a formal education already that seek lifelong learning or vocational training.

On the other hand, tertiary education can be divided into seven categories according to the type of institution; colleges and universities, industrial universities, universities of education, colleges of education, junior colleges, broadcast and correspondence universities, polytechnics, and other institutions (theological colleges and seminaries). The scope of tertiary education is wide, since it includes all the fields that come after secondary schooling, as seen in Table 2.1. Most of the students in tertiary education are enrolled in universities and junior colleges. These tertiary education institutions typically target the youth population who belong to the school age population. Many universities or junior colleges tend to operate academic programmes for the youth population. They also offer light vocational education and training programmes. Meanwhile, the programmes for adults in the tertiary education are very weak.

Lifelong learning allows adults to develop their skills. The main providers include universities of lifelong education, air and correspondence universities, corporate
universities, cyber universities, in-company colleges, private educational institutions (technical private school and regular private school), and regional lifelong academic centers. Korea’s national policy for lifelong learning is overseen by MEST according to the Lifelong Education Act. Similarly, vocational training is an important part of adult learning. In Korea, vocational training is based on the Vocational Skills Development Act. There are three vocational training programs: training for the unemployed, employer-entrusted training, and training for priority sectors. Also, employers offer their workers training opportunities supported by government subsidies. These types of training programs target incumbent workers and unemployed workers. Moreover, companies provide their own education and training through workplace training programmes. Korea’s on-the-job training programs are weak and ineffective, while the true nature of category and policy support is not well understood.

Figure 2.1 Topology of Post-secondary VET in Korea:

Otherwise, Korea’s traditional institutions of vocational education include vocational high schools, junior colleges, industrial universities, polytechnic universities, and polytechnics colleges. As seen in Table 2.1, vocational high schools are considered
secondary level education while the rest are considered tertiary level education. It is necessary to define four-year tertiary education institutions of higher learning by field of study and by orientation (academic or vocational), according to the OECD guidelines on scope of VET. Specialized colleges like the School of Law and the School of Medicine are not considered post-secondary VET. On the other hand, four year engineering schools that provide training for job placement are considered post-secondary VET.

Considering all of the above, Korean post-secondary VET can be classified under two types: junior colleges and polytechnic colleges. Of course, some part of vocational training and lifelong learning can be considered post-secondary VET. However, these are mixed between academic and vocational programmes. According to the above based on the OECD’s definition, most post-secondary VET programmes in Korea are composed of junior colleges and polytechnic colleges. In Korea, there are 767,087 students in 145 junior colleges, and 15,000 students in 11 polytechnic colleges over 34 campuses. The share of students in post-secondary VET programmes accounts for 21.5% of total tertiary education students (23.6% except graduate course students), as seen in Table 2.1. Students in junior colleges and polytechnic colleges account for 21.0% of total tertiary education students (23.3% except graduate course students). Most of the post-secondary VET students in Korea are enrolled in junior colleges.

4. History of Korean Post-secondary VET

In Korea, post-secondary VET is considered formal education as shown in Figure 2.1. The title “junior college” was renamed in 1979. It was a result of consolidating three programmes – such as two-year colleges, five-year vocational colleges, and special colleges – that had independently been operating until that time. Since then, junior colleges have been providing VET programmes to the youth population for 32 years. From 1997, junior colleges began to confer an associate degree to graduates. In 2003, junior colleges introduced three-year programmes in the field of healthcare. In 2007, MEST permitted junior colleges to establish specialized and advanced bachelor degree courses. Moreover, polytechnic colleges were established by MOEL in 1997. Then, MOEL consolidated 23 polytechnic colleges and 21 public vocational training institutions in 2006. Since then, polytechnic colleges have been granting associate degrees only to students that have completed two-year programmes.

The changes in Korean post-secondary VET reflect the changes in the demands of both industry and the students. Post-secondary programmes were initially established to address two needs: supplying skilled industrial workers and meeting the growing social demand for schooling. During the 1970s, the Korean economy grew rapidly. Korea at the time had a large supply of unskilled workers in the rural sector while industrial demand for skilled workers was high on the back of expanding production of more value-added goods. At the same time, the education demand of the baby boom generation was largely met by a rise in income which was driven by economic growth. Many high school graduates weren’t able to get a job and waited to enroll in university. Against this background, Korean post-secondary VET was established by the
government to satisfy the demand for skilled workers from industry and for educational opportunities from society. As such, the number of junior colleges largely increased along with universities. More than this, Korean society has long put much emphasis on obtaining an academic degree which has driven the strong demand for education. These factors led post-secondary VET institutions to grant associate and bachelor degrees. Recently, government regulations now allow junior colleges to be called universities. The fact that junior colleges now call themselves universities reflects Korean society’s preference for academically or higher education institutions relative to vocational education institutions.

These changes in Korean post-secondary VET closely relate to the long term changing trends in the industrial structure. One way to gage the employment market is to measure the state of supply and demand of workers between two points in time. As we show in Figure 2.2, the employment market in agriculture (forestry and fishing) accounted for roughly 63% of all workers in the 1960s, which has declined to 6.6% in 2010. On the contrary, employment in the manufacturing and services sector has increased from 8.7% and 28.3% in 1963 to 17% and 76.4% in 2010. Between the 1960s and 1970s, Korea’s industrialization resulted in an increase in manufacturing jobs. These changes reflect a shift in the employment market, going from largely agriculture to manufacturing and service.

**Figure 2.2 Employment Trend by Industry**

![Employment Trend by Industry](image)


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4 Five years ago, the Korean government began to allow the head of junior colleges to take the title of president or dean voluntarily. Also, the government began to permit junior colleges to change only their Korean name from “Jeonmoundahak (junior college)” to “Dahakgyo (university)” starting this year.
The changes in post-secondary are closely related to not only industrial demand for skilled workers but also dynamic or structural changes in the demography and labor population. These changes can be seen through changes in the supply and demand of skills in the labour market. The labour market is the mechanism through which workers and jobs are matched. Since Korea’s five-year plan for economic development in 1962, the number of certain kinds of jobs has expanded while other kinds of jobs have contracted. This means that the type and level of skills has expanded and contracted according to the characteristics of jobs. Both workers and employers have had to adapt to these changes in response to signals provided by the labour market. The combination of shifts in the industrial distribution of jobs and changes in the production technology within each sector has also required workers to acquire new skills and work in new jobs.

Figure 2.3 highlights some of the structural changes in Korea’s labour market. In the 1960s and 1970s, most of the labour force was in the rural area and able to secure a job. The structural shape of skilled workers resembled a pyramid. In Figure 2.3, the dotted line (supply line) shows the labor force, while the solid line (demand line) shows the employed workers. Thus, the labour market experienced a surplus of labour, as seen in Figure 2.3. At the time, the supply of labor was very elastic, while unemployment was high. However, simple training helped to address some of the unemployment. Also, the skills mismatch or skills gap in the labour market was filled through education and training within a short period. This was largely because low skilled workers were adequate to meet the demand for skilled workers during the initial stages of industrialization. Beginning in the late 1970s, the number of skilled trade and repair workers increased as a percentage of total employment, while employment opportunities for lower skilled jobs declined as a percentage of total employment.

Figure 2.3 Structural Change of the Korean Labour Market

Over the last thirty years of economic development, Korea’s industrial structure has advanced considerably. Moreover, the demand and supply structure for skills in the
labour market has changed considerably. During that time, industrial demand for more skilled workers has grown driven by advancements in technology and knowledge. At the same time, the size of post-secondary VET has expanded because of increases in the population size (baby boom generation) and the number of people entering the labour market. We see above in Figure 2.3, the supply of skills resembles a pentagon shape in the 2000s, while the demand of skills still resembles a triangle shape. The number of workers with mid level skills expanded. These workers accumulated skills in post-secondary VET or other tertiary education and experience working on the job. However, there is a shortage of low and high skilled workers in the labour market. Indeed, demand for not only high skilled but also low skilled workers remains high. In Figure 2.3, the area “A” reflects the excess supply of labour or surplus of mid level skilled workers in the labor market with a tertiary education and post-secondary VET, reflecting the skills mismatch or skill gap in 2000s. As such, there is a shortage of high skilled workers driven by the advancement of Korea’s economic structure. There is also a shortage of low skilled workers, as shown in “B” in Figure 2.2. This reflects the strong preference of upper secondary school graduates to continue schooling in a tertiary education institution instead of working at a small sized company, which are considered to be dirty, dangerous, or difficult, the 3Ds. This shortage of low skilled workers in Korea has been filled by foreign workers from Asian countries (foreign workers are estimated to account for about 4% of Korea’s total workforce).

This skills mismatch is also affected by the level of education. First of all, the increased number of students in tertiary education has also increased the education level of the labour force. As seen in Figure 2.3, the advancement rate to tertiary education began to quickly increase in the 1980s, which is right about the time that the baby boom generation would have entered into tertiary education. From the mid 1990s, the enrollment rate in tertiary education has increased continuously, reaching over 80% after the mid 2000s. Nowadays, most high school graduates go on to receive a tertiary education. As a result, it is creating a qualitative mismatch or skills gap in the labour market, and a difficult employment market.

Further, wages tend to rise with the level of education. If wage differences could not be explained by the level of education, then, there would be no incentive for students to invest in more education. We see in Figure 2.3, that the average wage of university graduates has been greatly higher than that of high school graduates in Korea until the 1980s. Then, the wage difference narrowed. But the average wage of university graduates still remains very high level at over 150 in 2010, compared to the average wage of high school graduates at 100. The average wage of junior colleges was over 140 in 1970s. After that time, the average wage declined to 120 in late 1980s, and is now at 106 in 2010. As such, the wage difference between high school and junior college graduates has largely narrowed. This narrowing in the wage gap can be explained by Korea’s seniority based labour system and by demographic changes. For example, a larger share of high school graduates is distributed among the baby boom generation than in younger generations. Under the seniority based labor structure, the wages of workers from the baby boom generation would be higher than wages of younger generations with a junior college education. Considering this point, wage differentials between junior colleges graduates and high school graduates would be
wider than the value shown in Figure 2.3. This means that the incentive for students to invest in post-secondary VET would be strong even after taking into consideration social preferences i.e. academic reputation that plays into school selection.

**Figure 2.4 Trends in Tertiary Education Enrollment and Wage Structure**

As a result, the skills mismatch has widened more and more since the 2000s. There is still demand for post-secondary VET in the education market, although the school age population has declined rapidly. In sum, the Korean post-secondary VET and tertiary education needs to be reformed to address the skills mismatch or shortage of skilled workers.

Note: Ratio of tertiary education enrollment lies between 0% and 100%. The wage indexes show the average wage of junior colleges graduates and universities graduate when the average wage of high school graduates in the labour market is 100.

Source: MOEL, Survey on Labor conditions by Type of Employment, Various Years. MEST, Statistical Yearbook of Education, Various Years.
III. Structure of Post-secondary VET

1. Features of Korean Post-secondary VET

<Korean Tertiary Level>
Korean tertiary education is largely composed of universities and junior colleges. In Korea, tertiary education has experienced rapid growth over the last decade. It continues to experience new pressures due to the globalization of the economy and labor market. Since 2000, the number of four year universities has increased. However, the number of junior colleges has gradually been decreasing since 2005. Over this period, the number of students in junior colleges has been shrinking due to Korea’s low birth rate that has dwindled the school age population, which has been accompanied by the growing preference for academically oriented tertiary schools.

Table 3.1 Institutions and Student/Faculty Ratio

<table>
<thead>
<tr>
<th>Year</th>
<th>University</th>
<th></th>
<th></th>
<th>Junior College</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Institution</td>
<td>Student/Faculty</td>
<td>Institution</td>
<td>Student/Faculty</td>
<td>Institution</td>
<td>Student/Faculty</td>
</tr>
<tr>
<td></td>
<td>Public</td>
<td>Private</td>
<td>Public</td>
<td>Private</td>
<td>Public</td>
<td>Private</td>
</tr>
<tr>
<td>2001</td>
<td>26</td>
<td>136</td>
<td>23.5</td>
<td>29.2</td>
<td>15</td>
<td>143</td>
</tr>
<tr>
<td>2002</td>
<td>26</td>
<td>137</td>
<td>23.4</td>
<td>29.0</td>
<td>16</td>
<td>143</td>
</tr>
<tr>
<td>2003</td>
<td>26</td>
<td>143</td>
<td>23.4</td>
<td>29.3</td>
<td>16</td>
<td>142</td>
</tr>
<tr>
<td>2004</td>
<td>26</td>
<td>145</td>
<td>22.4</td>
<td>28.6</td>
<td>15</td>
<td>143</td>
</tr>
<tr>
<td>2005</td>
<td>26</td>
<td>147</td>
<td>21.2</td>
<td>27.3</td>
<td>14</td>
<td>144</td>
</tr>
<tr>
<td>2006</td>
<td>25</td>
<td>150</td>
<td>20.7</td>
<td>26.4</td>
<td>13</td>
<td>139</td>
</tr>
<tr>
<td>2007</td>
<td>25</td>
<td>150</td>
<td>20.7</td>
<td>26.5</td>
<td>11</td>
<td>137</td>
</tr>
<tr>
<td>2008</td>
<td>25</td>
<td>149</td>
<td>20.5</td>
<td>25.8</td>
<td>10</td>
<td>137</td>
</tr>
<tr>
<td>2009</td>
<td>26</td>
<td>151</td>
<td>21.8</td>
<td>25.9</td>
<td>10</td>
<td>136</td>
</tr>
<tr>
<td>2010</td>
<td>27</td>
<td>152</td>
<td>21.4</td>
<td>26.0</td>
<td>9</td>
<td>136</td>
</tr>
</tbody>
</table>

Note: Student/Faculty = (Includes registered students except students on temporary leave from school / full-time faculty.)*100
Source: MEST, Statistical Yearbook of Education, various years.

The student to faculty ratio in junior colleges was also very high until the early 2000s. As we can be seen in Table 3.2, the fixed number of faculty in junior colleges totaled 23,043 in 2010, with 428 professors in public colleges and 22,615 professors in private colleges. The faculty retention rate was 53.8%, with 53.5% in private institutions and 69.2% in public institutions. The number of faculties in private

5 The fixed number of faculty is prescribed by Higher Education Act. By this Act, the fixed number
colleges was fewer than public colleges. Also, there was two times more part-time faculty than full-time in public colleges. In Korea, the faculty structure in junior colleges is very weak in relation to the quality of post-secondary vocational education and training. However, the student to faculty ratio has been decreasing since 2000 due to the low birth rate that has led to the falling number of students and schools.

Table 3.2 Statues of Faculty in Junior College

<table>
<thead>
<tr>
<th></th>
<th>Fixed Number of Faculty</th>
<th>Number of Faculty</th>
<th>Retention Rate of Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Full-time</td>
<td>Part-time</td>
<td>Full-time</td>
</tr>
<tr>
<td>Public</td>
<td>428</td>
<td>296</td>
<td>683</td>
</tr>
<tr>
<td>Private</td>
<td>22,615</td>
<td>12,090</td>
<td>29,468</td>
</tr>
<tr>
<td>Total</td>
<td>23,043</td>
<td>12,386</td>
<td>23,412</td>
</tr>
</tbody>
</table>


Although the number of institutions has been decreasing recently, the size of Korea’s tertiary education has been rapidly growing since 1980 driven by growing demand for higher education. Indeed, there has been a large increase in the number of private universities. During this time, the number of students has also increased while the number of professors or instructors has not increased as fast as the number of students, which has increased the student to faculty ratio. The high student to faculty ratio has been greater in junior colleges compared to universities while the ratio has been more pronounced in private universities compared to public universities. The quality of education offered by private universities and junior colleges has been inadequate.

The growth in tertiary education has been followed by a growth in the fields of natural sciences and engineering during the 1980s. After 2000, the number of students studying in these fields began to decline, essentially because students that had studied these fields had lower grades than previous students. In 1980, the number of students in universities totaled 392,926. By 2010, the total had grown to 2,028,842, an increase of about 5.2 times. The number of students at junior colleges also increased at about 4.6 times from 164,419 in 1980 to 763,599 in 2010. Over the same period, the number of students studying natural sciences and engineering increased steadily until 2000 when it started to decrease. The student age population has also become smaller while demand for tertiary education has grown, which has impacted the labour supply. However, the number of students studying humanities and social sciences in universities has been continuously increasing. Since 2000, the decrease in the total number of students in junior

of faculty includes four types such as a professor, an associate professor, an assistant professor, and a full-time lecturer. Therefore, the retention rate of faculty is calculated by the fixed number of faculty and the number of full-time faculty members.
colleges was due to the fast decrease in the number of students studying natural science and engineering. Though the role of junior colleges in educating technicians and engineers for manufacturing industry has decreased since the mid 2000s, it has played a larger role in producing workers for the service industries.

![Figure 3.1 Number of Students in Tertiary Education](image)

Note: the number of students means the registered students (contained students of temporary leave from school)
Source: MEST, Statistical Yearbook of Education, various years.

More recently, the number of students enrolling in tertiary education has sharply decreased due to Korea’s low birth rate. This will mean that many universities or junior colleges will not be able to meet their admissions targets. On top of this, many of Korea’s academically inclined students want to enroll in four-year universities in Seoul; therefore, universities in rural or provincial regions will likely face additional pressure to meet admissions targets. The falling enrollment rate in junior colleges and universities in rural or provincial regions has resulted in a shortage of highly qualified workers in rural and provincial regions, further hurting their prospects for development.

In addition, a high proportion of students, or over 30% of total students, tends to take a temporary leave of absence from school. Moreover, a greater share of
students who take time off from school has been in junior college. The share of
junior college students taking time off has been about 35%, while about 31% in
universities. The high number of students taking time off from school can be
contributed to male students completing compulsory military service and to
students enrolled in junior colleges or provincial universities studying to retake the
college-entrance exam to enroll in a top university. In Korea, there is great societal
pressure to get an education at a top or prestigious academic institution.

**Figure 3.2 Ratio of Students Taking Temporary Leave of Absence**

As the number of higher education institutions expanded, many junior colleges
were granted the status of universities, going from two year programs to four year
programs. Recently, the deans of junior colleges also changed their titles to
“presidents” as commonly found in universities while the school’s name remained
unchanged. This has been in part because of the Korean social dogma that an elite
education can only be acquired from academically driven schools. The most sought
out universities are located in Seoul, including those that have changed their names.
Moreover, top scholars are believed to have graduated from top universities,
leading to the term “academic exclusivity.” Koreans have come to associate higher
education with a top academic school.
Korean polytechnic colleges are a group of post-secondary institutions that are publicly funded. Korean polytechnic schools are specially designed by the government to raise the level of technical competency. Polytechnic colleges consist of seven regional colleges (or regional hub colleges) and four specialized colleges. With each regional college having two to eight campuses, the total number of polytechnic campuses is 43. In March 2006, the government consolidated 23 polytechnic schools and 21 public vocational training institutions, which had been responsible for public training, into the Korean Polytechnic College. The aim was to create institutions with sufficient size and capacity to serve as regional hubs for vocational education and training, and to better manage these institutions.

Polytechnics have about 15,000 students. In 2010, the number of new students enrolled in the associate degree programmes was 8,188. The number of students enrolled in a specialty trade course was 6,273. This accounts for only about 0.4% of the total number of students in tertiary education, and about 2.0% of the total number of junior college students.

<table>
<thead>
<tr>
<th>Table 3.3 Number of New Students in Polytechnics (Unit: person)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
</tr>
<tr>
<td>Associate degree program</td>
</tr>
<tr>
<td>Craftsman training program</td>
</tr>
</tbody>
</table>

Source: The Body Corporate of Polytechnic, Internal Document.

On the other hand, the number of instructors was 1,195 in 2010. The student to faculty ratio was 12.6. This is lower than the ratio found in universities and junior colleges. Thus, we can expect that the quality of education and training in polytechnic is better than that of universities and junior colleges. In reality, the rate of employment for polytechnic graduates is higher than the rate for universities and junior colleges.

<table>
<thead>
<tr>
<th>Table 3.4 Present State of Staff and Instructors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty (professor)</td>
</tr>
<tr>
<td>Number</td>
</tr>
</tbody>
</table>

Source: The Body Corporate of Polytechnic, Internal Document.

Polytechnic schools provide a wide range of training programs for the development of lifelong skills for various groups of people. Their skills development course is divided into two types: two-year associate degree and six-month to one-year programmes for craftsmen and master craftsmen. The two-year and one-year programmes are considered as post-secondary VET, while most of the other programmes are considered vocational training for employed workers, unemployed workers, retired military servicemen, housewives, North Korean defectors, or people in...
need of skills development within a short period. Also, polytechnic colleges provide off-campus training and long distance learning programs for residents of remote villages in mountains and islands. However, these programs are all short-term programmes under one-year.

2. Programme Features

< Junior Colleges >

Junior colleges mostly offer two-year programmes and some three-year or four-year programmes. Three-year or four-year programmes are in the fields of nursing, health, and physiotherapy. In two-year programmes, students must earn a minimum of 80 credits per the Higher Education Act. Also, students enrolled in technician courses have to complete 1,712 hours of class for an associate degree according to the Higher Education Act.

As seen in Figure 3.1, the number of students in junior college has sharply risen since 2000 in Korea. Since then, it has declined due to a decrease in the school age population. More specially, the decrease in the number of students was more pronounced in the fields of science and engineering. Figure 3.3 offers a more detailed analysis of the fields studied by students.

![Figure 3.3 Number of Students by Programme](image)

As seen in Figure 3.3 and Figure 3.4, service jobs are associated with fields in humanities, education, and social science. Engineering and technical jobs are associated with the fields of engineering, medical science, and natural science. According to this classification, there are about 181,000 students taking courses related
to the service sector, and about 228,000 students taking courses related to engineering and technical jobs in 2010. Although the number of students in junior colleges has continuously decreased since 2000, the number of students studying engineering and technical courses has declined the most.

Furthermore, the menu of programmes offered at junior colleges varies widely with 5,446 different courses being offered. Meanwhile, the number of programmes offered continues to increase. Based on the type of courses offered, engineering and technical courses account for 44.7% of the total courses, which totals 2,411. Service related courses account for 31.1% of the total courses. Overall, the number of courses has been increasing for all of the departments since 2006. In 2010, there were 1,349 courses offered to students in social sciences. In engineering and arts, there were 1,323 and 1,343 courses offered, respectively. In each of the departments in humanities, education, natural sciences, and medical sciences, there were 764 courses offered in each department. Based on the rapid growth of course offerings, it would seem that schools would be well placed to cope with the technological changes and skill needs of the labour market.

Figure 3.4 Number of Programmes in Junior Colleges

![Figure 3.4 Number of Programmes in Junior Colleges](image)


However, many of the newly-established courses are in fact very similar to existing courses in terms of content. Indeed, the new courses in humanities essentially resemble the existing ones. Many Korean junior colleges simply change the name of a course to recruit students interested in a specific field of study or job, and hence, keep enrollment rates high. In Korea, new students are an important source of funding for junior colleges, because most of the junior colleges are private. Thus, they must rely on student tuition for funding.
Besides the general programmes discussed above, there are three special programmes designed for students wanting to take advanced specialist courses, trust courses, and customized education courses. The advanced specialist courses target students that have an associate degree or a similar level of education with more than one year of working experience. These courses are offered as programmes for re-training or career development for learning new skills and expertise. In addition to the standard curriculum, students in advanced specialist courses may take part in special programs, in which the president of the junior college grants a bachelor's degree. To complete this program, students have to earn 140 credits outside of the credit already earned from general junior college courses. In 2010, the number of students enrolled in advanced specialist courses was 6,669.

When students are sponsored by the military or an industrial organization, they are enrolled in the trust courses offered by junior colleges. Most junior colleges provide evening programs in order to make educational opportunities more accessible to workers. In 2010, there were 359 students from the military taking engineering courses, while there were 19 students in natural science, 303 students in humanities and social science, and 5 students in arts. There were 12,976 students in humanities and social science, 7,268 students in engineering, 2,201 students in natural science, and 1,616 students in arts.

Finally, customized educational courses are supposed to be designed as training programmes that reflect the needs of industry. Students participating in a customized education programme are encouraged to focus on their desired field of interest. For example, the programme in Yeungjin College allows students to concentrate on acquiring specific skills. Consequently, students are trained like technicians with real work experience but not having had job training. Ajou Motor College also introduced a customized training programme as a pilot in 1996. The distinct feature of Ajou Motor College’s customized training method is the made-to-order approach it has adopted. The model of the customized training programme was first conceived to strengthen the competitiveness of small and medium enterprises (SMEs). Industry and the colleges have entered into a mutual agreement to establish customized training programmes to strengthen competitiveness, especially among SMEs (Lee, 2007).

Politechnic colleges offer a wide range of training programmes in lifelong learning for all kinds of people that want to develop their skills. They offer unique programmes for training middle-level or multi-skilled technicians in demand by industry such as the mechanical, electronic and automobile industries, which are difficult for privately-run schools to operate due to the large investment necessary to build and maintain training facilities. Other distinct features include a low tuition fee with all field-oriented courses. Politechnics offer four types of training programmes: technician, master-craftsman,
craftsman, and others. Training programs for technicians and master-craftsman are part of post-secondary VET programmes that are one-year or two-years in length. The training programme for craftsman is also considered as post-secondary VET that is 6 months to one year in length. Other trainings programmes are designed for employed workers wanting to learn a new skill. It is also used to train former military servicemen, North Korean defectors, and others.

**Technician Training**

These programmes are two year training programs that offer an associate degree to students. The aim of programme is to train technicians with the skills needed by industry. Students have to get 108 credits in order to graduate from the programme. The credit requirements are defined by the Workers’ Skills Development Act which was amended by the Ministry of Labor in 2005. Also, students are required to attend 2,384 hours of classes to earn an associate degree according to the Worker’s Skills Development Act. The training programme’s curriculum is based on 40% theoretical and 60% practical instruction. This is basically the opposite of the curriculum taught at junior colleges. For these programmes, instructors should be qualified with a masters or doctorate degree in their field of instruction. In fact, 95% of the instructors have a national technical certificate.

**Figure 3.5 The Composition Ratio of Technician Programmes (2-year courses)**

![Pie chart showing the composition ratio of technician programmes](image)

Note: % is calculated by number of students. Others mean fabrics and bio.

The Polytechnic College Act provides detailed guidelines on curriculum, credit requirements for graduation, course instructions, delivery of open style lectures, etc.
Polytechnic schools offer various programmes in one of the following areas; information, electrics, electronics, machinery, metal, architecture, industrial application, and design/textile. Technician programmes seek to train students in a wide range of skills that covers a total of 64 disciplines in 147 courses, including automation systems, car electronics, mechatronics, and computer-applied molding. As seen in Figure 3.5, mechanical engineering accounts for 26% of the programme, 19% for telecommunications, 13% for electronics etc. All the training programmes in polytechnic schools were established to meet the skill needs in the manufacturing industry.

Master-craftsman Training
Polytechnic schools offer one- to two-year programmes to be qualified as a master craftsman in engineering. Students must have more than three years of work experience to enroll in the one-year Master Technician Programme. To qualify for the one-year training programme, candidates must have a Grade 1 technician (or industrial technician) certification or have more than three years of working experience, or have a Grade 2 technician certification or have more than five years of working experience. To qualify for the two-year programme, candidates must have a Grade 1 technician (or industrial technician) certification or have more than one year of working experience in the field of study, or have a Grade 2 technician certification or have three years or more of relevant work experience, or have more than seven years of work experience in the field of study. Furthermore, Master-Craftsman training programmes are offered in the evening and in six molding (Lee, 2007). Also, students can qualify to become instructors after completing the programme.

Craftsman training
The craftsman training programmes are offered by regional polytechnic schools and last for one year. The programmes target unemployed workers, women, and younger people not intending to enroll in higher education. These programmes do not require any qualification such as a high school degree. To complete the program, candidates must take 1,400 hours of classes, which include 140 hours of instruction in basic theory, 280 hours in advanced theory, and 980 hours in advanced practical knowledge. Also, candidates are trained in computer aided machinery, computer aided dying and molding, and industrial installation.

Other training
Polytechnic schools also offer short-term programmes for training employed workers, unemployed workers and retired military servicemen. Polytechnic schools also offer off-campus and long distance training programmes that target residents of remote villages in mountains and islands. The programme is also made available to individuals with physical disabilities as well as North Korean refugees. This training programme plays an important role in training employed workers as a way to upgrade the skill level in the labour market.
3. Excess and Completion

Obtaining a tertiary education is the most important investment in human capital development a person can make in their lifetime. Those with a tertiary education can expect to earn a higher income over their lifetime, especially those that graduated from an elite university. More investment in education can also lead to the attainment of higher social status.

In Korea, the enrollment rate of high school graduates in tertiary education has surged rapidly from 27.2% in 1980 to 84.9% in 2009. Since the 1980s, Korea has maintained a policy of expanding access to higher education for high school graduates. Driven by increased demand for higher education, regulations on establishing two-year colleges and four-year universities were eased, while student enrollment quotas at existing institutions were increased. In Korea, most of the student age population is entering into universities or junior colleges. Moreover, most graduates of professional high schools are advancing to universities or junior colleges instead of entering the labour market.

Table 3.5 Advancement Rate by Education Level

<table>
<thead>
<tr>
<th>Year</th>
<th>Elementary → Middle</th>
<th>Middle →High</th>
<th>High School → Tertiary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Total</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1970</td>
<td>66.1</td>
<td>70.1</td>
<td>26.9</td>
</tr>
<tr>
<td>1980</td>
<td>95.8</td>
<td>84.5</td>
<td>27.2</td>
</tr>
<tr>
<td>1990</td>
<td>99.8</td>
<td>95.7</td>
<td>33.2</td>
</tr>
<tr>
<td>2000</td>
<td>99.9</td>
<td>99.5</td>
<td>68.0</td>
</tr>
<tr>
<td>2010</td>
<td>99.9</td>
<td>99.7</td>
<td>79.0</td>
</tr>
</tbody>
</table>

Note: Advancement rate = (number of advanced graduates/number of total graduates) × 100.

Korea has selective admission procedures for both junior colleges and polytechnic colleges. Admissions to junior colleges are open to graduates of the school age population and other adults. However, most of the applicants to junior colleges are graduates of upper secondary schools. In Korea, most upper secondary students continue to tertiary education. Junior college admissions declined from 318,315 in 2000 to 249,144 in 2010, due largely to the shrinking school age population. This means that high school graduates make up a large

7 There are two types of VET admissions: open access and selective assess. In fact, unrestricted open access to higher education is a distinct feature of many European countries. For example, the Baccalaureat in France grants automatic access to university and non-university education. Also, American community colleges must accept anyone who holds a high school diploma or equivalent qualification. In contrast, some countries, like Germany and the Netherlands, may apply a mix of “open” and “selective” admission procedures. In Germany, 50% of higher education programmes do not restrict the number of admitted applicants if they satisfy the minimum entry requirements. However, due to capacity constraints, nearly all German Fachhochschulen must restrict the access of incoming students for certain programmes.
part of new junior college entrants. Most of the new students are upper secondary graduates. In 2010, the composition of junior college entrants are as follows: 31% are academic high school graduates, 29% are professional high school graduates, 23% are repeat applicants, 8% are graduates of other high schools, and 8% are other. Upper secondary graduates comprise 90% of total entrants. There is also a large share of students that apply by taking the college entrance exam due to strong demand for higher education in Korea. This high share of high school graduates receiving a vocational education in junior colleges is due to the high number of enrollments into tertiary education since 2000. As seen in Table 3.5, the high admissions rate to tertiary education is driven by Korean’s strong preference of investing in higher education.

Table 3.6 Distribution of Applicants to Junior Colleges

<table>
<thead>
<tr>
<th>Year</th>
<th>Entrants</th>
<th>Academic High School Graduates</th>
<th>Vocational High School Graduates</th>
<th>Repeating Examinees</th>
<th>Others High School Graduates</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>249,144</td>
<td>31%</td>
<td>29%</td>
<td>23%</td>
<td>8%</td>
<td>8%</td>
</tr>
<tr>
<td>2009</td>
<td>242,525</td>
<td>28%</td>
<td>31%</td>
<td>28%</td>
<td>6%</td>
<td>7%</td>
</tr>
<tr>
<td>2008</td>
<td>249,291</td>
<td>26%</td>
<td>30%</td>
<td>28%</td>
<td>8%</td>
<td>8%</td>
</tr>
<tr>
<td>2007</td>
<td>255,395</td>
<td>24%</td>
<td>28%</td>
<td>32%</td>
<td>8%</td>
<td>8%</td>
</tr>
<tr>
<td>2006</td>
<td>254,433</td>
<td>24%</td>
<td>28%</td>
<td>34%</td>
<td>6%</td>
<td>9%</td>
</tr>
<tr>
<td>2005</td>
<td>251,283</td>
<td>23%</td>
<td>28%</td>
<td>35%</td>
<td>6%</td>
<td>9%</td>
</tr>
<tr>
<td>2004</td>
<td>259,182</td>
<td>23%</td>
<td>27%</td>
<td>33%</td>
<td>8%</td>
<td>9%</td>
</tr>
<tr>
<td>2003</td>
<td>275,318</td>
<td>25%</td>
<td>30%</td>
<td>36%</td>
<td>1%</td>
<td>8%</td>
</tr>
<tr>
<td>2002</td>
<td>311,304</td>
<td>27%</td>
<td>28%</td>
<td>31%</td>
<td>6%</td>
<td>8%</td>
</tr>
<tr>
<td>2001</td>
<td>322,687</td>
<td>25%</td>
<td>28%</td>
<td>28%</td>
<td>9%</td>
<td>10%</td>
</tr>
<tr>
<td>2000</td>
<td>318,135</td>
<td>24%</td>
<td>26%</td>
<td>28%</td>
<td>11%</td>
<td>11%</td>
</tr>
</tbody>
</table>


The junior college education system is flexible enough to allow students to choose between night classes and day classes to suit their needs. Most junior colleges offer sponsored training programmes in the evening to make educational opportunities more accessible to workers with full-time jobs. These institutions also offer advanced specialist courses for people who have an associate degree or a similar level of education with more than one year of working experience. These advanced courses offer opportunities to secure new skills and expertise, and refresh old ones. The graduates of junior college programmes are awarded an associate degree. Taking advanced specialist courses or special courses can also lead to credits (Lee, 2007).

Polytechnic schools are also open to all people including the school age population, employed workers, and people with disabilities, etc. Typically, beginner’s technician training courses are taken by younger students from the school age population, while training courses for more experienced workers are taken by employed workers, unemployed workers, women, and others. Most of the new students enrolled in technician programmes are high school graduates. In 2010, 55.6% of the students in polytechnic colleges were vocational high school graduates, and 44.8% were high school graduates. The
share of vocational high school graduates has continuously declined, falling from 60.5% in 2003 to 44.4% in 2010. Indeed, the share of vocational high school students has declined significantly along with the school age population. On the other hand, tertiary education graduates are entering into polytechnic colleges again in spite of obtaining an associate degree or a bachelor’s degree. The enrollment rate of junior college graduates was only 0.4%, but it increased to 5.0% in 2010. The number of university graduates enrolling into polytechnic colleges has also increased from 0.2% in 2003 to 1.3% in 2010. This leads us to the conclusion that tertiary education graduates are not able to secure jobs after finishing junior college or university.

### Table 3.7 Distribution of Applicants to Polytechnics (two-year courses)

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of Total Entrants</th>
<th>Academic High School Graduates</th>
<th>Professional High School Graduates</th>
<th>Junior College Graduates</th>
<th>University Graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>9,038</td>
<td>39.5%</td>
<td>60.5%</td>
<td>0.4%</td>
<td>0.2%</td>
</tr>
<tr>
<td>2004</td>
<td>9,126</td>
<td>38.6%</td>
<td>61.4%</td>
<td>0.1%</td>
<td>0.5%</td>
</tr>
<tr>
<td>2005</td>
<td>9,797</td>
<td>35.7%</td>
<td>64.3%</td>
<td>1.3%</td>
<td>0.8%</td>
</tr>
<tr>
<td>2006</td>
<td>10,252</td>
<td>36.2%</td>
<td>63.8%</td>
<td>1.1%</td>
<td>0.7%</td>
</tr>
<tr>
<td>2007</td>
<td>8,821</td>
<td>40.7%</td>
<td>59.3%</td>
<td>1.2%</td>
<td>0.5%</td>
</tr>
<tr>
<td>2008</td>
<td>8,253</td>
<td>41.6%</td>
<td>58.4%</td>
<td>2.7%</td>
<td>0.4%</td>
</tr>
<tr>
<td>2009</td>
<td>7,967</td>
<td>44.8%</td>
<td>55.2%</td>
<td>3.9%</td>
<td>1.1%</td>
</tr>
<tr>
<td>2010</td>
<td>8,188</td>
<td>44.4%</td>
<td>55.6%</td>
<td>5.0%</td>
<td>1.3%</td>
</tr>
</tbody>
</table>


**<Completion and Drop-out Rate>**

The figure for the drop-out rate at the post-secondary level is complex and hard to calculate. Drop-out is understood as the non-completion of post-secondary VET qualification. At the international level, much of the differences seen in the drop-out rate can be attributed to the way it is measured and the ability of countries to follow the behavior of former students no longer in school. This can make international comparisons extremely difficult and in many cases, impossible. In the context of this report, drop-outs are understood as the non-completion of post-secondary VET qualification. Completion rates offer a complementary tool to evaluate the internal efficiency of the tertiary VET system. In reality, completion and drop-out behavior is, in itself, variable; students may change programmes, interrupt their studies temporarily or drop out altogether (Jenkins, 2011). However, Korea does not have detailed data based on the field or level of study. Thus, we look at the drop-out rate among students from junior colleges and polytechnic colleges.

The drop-out rate in higher education varies between junior colleges and universities. The university drop-out rate hovers at about 4% level. However, the junior college drop-out rate was 4.6% in 2000, and increased sharply to 7.8% in 2005. As such, the drop-out rate in junior colleges is relatively higher than in universities. Specifically, a
higher number of junior college drop-outs tend to be transfers to four year universities. In Korea, the strong societal demand or preference for a top education has led many students to seek out private tutoring outside of schooling. Private tutoring has increased the cost of education, putting additional cost burden on parents, and in particular, newlyweds which in turn contributes to Korea’s low birth rate.

**Figure 3.6 Drop-out Rate of Higher Education**

![Figure 3.6 Drop-out Rate of Higher Education](image)

Note: Drop-out rate is this year’s No. of Student / last year’s enrolled students
Source: Korean Council for University Education, 2010

In contrary, the drop-out rate in polytechnic colleges has remained between 12.6% and 14.4% during last ten years. This is a higher rate compared to junior colleges. Although it is nearly impossible to identify a single factor that causes students to drop-out because the ultimate decision to drop-out is the product of multiple factors or reasons, the higher drop-out rate in polytechnic colleges can be explained from the fact that polytechnic students return to their jobs.\(^8\) Most polytechnic college students do

---

\(^8\) The applicants of polytechnics must have either completed high school, or be in the graduating class, or should be recognized as having achieved a level of education appropriate for a high school graduate. If the applicant enters an evening programme, he or she must earn credits for practical instructions, which might involve working experience in an industry. A person employed in a company which is in the same industry as that which he or she is studying (including students in the final year of vocational high school who are participating in OJT) or has more than two years of working experience in a related industry, will be able to have that experience recognized as equivalent credit.
not want to enter into four-year universities, but most males tend to begin their military service requirements mid-way through their program as in the case of junior college students. Based on interviews of faculty at polytechnic colleges, the most important reason attributed to the higher drop-out rate in polytechnic colleges than in junior colleges is because of the strict rules applied in terms of attendance and credits.

Table 3.8 Drop-Out Rate in Polytechnic Colleges

<table>
<thead>
<tr>
<th>Year</th>
<th>Entrance Quota</th>
<th>Entrance(A)</th>
<th>Drop-Out(B)</th>
<th>Drop-Out Rate(B/A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>15,340</td>
<td>16,155</td>
<td>2,187</td>
<td>13.5</td>
</tr>
<tr>
<td>2009</td>
<td>15,490</td>
<td>16,220</td>
<td>2,291</td>
<td>14.1</td>
</tr>
<tr>
<td>2008</td>
<td>15,850</td>
<td>17,074</td>
<td>2,394</td>
<td>14.0</td>
</tr>
<tr>
<td>2007</td>
<td>16,935</td>
<td>19,073</td>
<td>2,394</td>
<td>12.6</td>
</tr>
<tr>
<td>2006</td>
<td>17,905</td>
<td>19,848</td>
<td>2,760</td>
<td>13.9</td>
</tr>
<tr>
<td>2005</td>
<td>17,850</td>
<td>18,923</td>
<td>2,578</td>
<td>13.6</td>
</tr>
<tr>
<td>2004</td>
<td>17,850</td>
<td>18,164</td>
<td>2,502</td>
<td>13.8</td>
</tr>
<tr>
<td>2003</td>
<td>18,175</td>
<td>18,421</td>
<td>2,646</td>
<td>14.4</td>
</tr>
<tr>
<td>2002</td>
<td>18,245</td>
<td>18,569</td>
<td>2,622</td>
<td>14.1</td>
</tr>
<tr>
<td>2001</td>
<td>17,550</td>
<td>17,955</td>
<td>2,455</td>
<td>13.7</td>
</tr>
</tbody>
</table>


In Korea, many students that transfer to four year universities are mostly from junior colleges or regional universities. This has to do a lot with the growing trend of students wanting to locate closer to Seoul. As shown in the Figure 3.4, the number of students from junior colleges and regional universities that transfer to universities in Seoul has been at least ten times greater during 1990 to 2000. After the financial crisis in 1997, graduates of junior colleges and regional universities had a much harder time finding a job as unemployment rose in Korea. The high transfer rate still continued in 2009, indicating that graduates of junior colleges and regional universities have difficulties in landing a job (Kim, et al, 2010).

Also, the completion rate is a very important indicator in measuring the state of post-secondary VET in Korea. Here, we can apply tertiary education data from the OECD. In OECD countries, three out of every ten new students enrolled in tertiary education on average fails to successfully complete a degree. Despite efforts to significantly expand enrollment in tertiary education, a high rate of students that fail to complete their studies persists (OECD, 2009). Unlike OECD countries, Korea has a relatively high ratio of students finishing their programmes. This would imply that students are able to obtain a bachelor’s degree without further accumulation of human capital. In Korea, the percentage of students that complete tertiary education is 85%, making Korea the second highest among OECD countries after Japan.
4. Employment Rate and Entry into the Labour Market

1) Industrial Manpower Employment

The employment prospects of post-secondary VET graduates are affected by labour market conditions, specifically the kinds of skills that are in demand. Moreover, the kind of skills needed in the labour market depends on the structure of the economy or industry. Although Korea managed to rebound from the global recession, it faces a structural problem of “lowered growth within increased disparity.” Korea had already experienced a period of low economic growth, which has led to greater social polarity under global completion. Such polarity is a result of the way skills were formed during Korea’s industrialization. Now small and medium-sized enterprises and self-employed businesses have difficulty acquiring skills. During the 1970’s and 1980’s, the main economic development strategy was based on a huge input of low skilled labor, characterized by a repeated production pattern. However, recent changes in consumer patterns and mode of production have resulted in a need for a high level of creative skills, which has not been supplied by the skills development system.

The gap between the small and medium-sized enterprises (SMEs) and large enterprises (LEs) has been a serious problem in Korea. It can be explained by wage differentials. The wage given to workers in SMEs is lower than that of workers in LEs.

that employ more than 300 workers. Moreover, the wage gap has significantly widened from 92% in 1980 to 78% in 2009, while the number of workers employed in SMEs has increased from 62.6% in 1981 to 86.2% in 2008. This explains how the disparity between SMEs and LEs has been steadily growing.

Table 3.9 Wage Differentials between SMEs and LEs

<table>
<thead>
<tr>
<th>Year</th>
<th>1980</th>
<th>1990</th>
<th>2000</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relative wage rate</td>
<td>92%</td>
<td>86%</td>
<td>82%</td>
<td>78%</td>
</tr>
</tbody>
</table>

Note: Relative wage rate reflects the SME wage index calculated with the assumption that the average wage of LEs equals 100. (Firms with less than 300 workers are SMEs while firms with more than 300 workers are LEs). Source: Ministry of Employment and Labor, Survey on Wage and Working Hours at Establishments, various years.

Table 3.10 Relative Sizes between SMEs and LEs

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Share of SME Workers</td>
<td>62.6%</td>
<td>78.5%</td>
<td>88.0%</td>
<td>86.2%</td>
</tr>
</tbody>
</table>

Note: 1) Rate of SMEs = (the number of SMEs) / (the total number of enterprises)*100. 2) Rate of SME employee = (the number of SME employees) / (the total employees)*100 Source: Korea National statistic Office, Census on Establishments, various years.

In summing up the discussions above, the skills gap or skills shortage in the labour market is more serious in SMEs and micro-businesses, and among young adults. In particular, tertiary educated graduates are experiencing difficulty in getting jobs in the labor market. Tertiary educated graduates prefer not to work at SMEs; in that, their expectations of wages continues to be higher than the real wage that SMEs are able to pay. Moreover, SMEs and micro-businesses do not have the opportunity to invest in the education and training of their workers. Indeed, young tertiary educated graduates face a tough time making the transition from school to work, while SMEs and micro-businesses face a tough time employing workers with the right skills.

It is very important to understand a firm’s level of productivity and share of workers relative to the labor market. Large firms have higher productivity than small and medium-sized firms. Large firms are often in the high-technology, highly competitive export sector. They engage in more research and are far more likely to offer regular employment. They provide stable jobs with high pay and social protection. On the other hand, small and medium-sized enterprise (SMEs) exhibit lower productivity compared to larger enterprises. Despite this, SMEs employ 90% of the total workers and their share of employment is increasing. They are mainly involved in the services and low-technology sectors. Wage paid by SMEs are also below those of LEs. Workers in small firms with 10 to 29 employees received on average 58% of the wages of workers in large firms with 500 or more employees in 2004 (Hwang, 2006)

The gap between large firms and service oriented SMEs is becoming wider. As the SME sector has expanded, the incidence of temporary employment, the largest category of irregular workers, increased from 17% in 2001 to 30% in 2004, almost double the OECD average (OECD, 2008c). This goes hand in hand with a large wage gap between regular and irregular workers. As a result, the more highly qualified graduates have sought out better jobs and regular employment. This is seen as a key source of the increasing income inequality in Korea (OECD, 2007a, p. 17).
Moreover, wages of four-year university graduates continue to be comparably higher than those of high school graduates. The wage gap between high school graduates and junior college graduates has gradually decreased. Although the wage difference between high school graduates and four-year university graduates has decreased slightly, the difference is still high. On top of this, most companies determine their wages based on seniority. This means that the rapid expansion of tertiary education has led to distortions in human capital investment; in that, it has led to worsening structural unemployment as well as widening skills gap or skills mismatch. As such, differences in wages based on level of education have led to a rapid expansion of tertiary education. This has impacted the education market while it has raised wages in the labour market. In spite of a rapid expansion of tertiary education, wage differences in the labour market continue to persist.

Table 3.11 Wage Differentials by Education Level

<table>
<thead>
<tr>
<th>Year</th>
<th>High school graduates</th>
<th>College graduates</th>
<th>University graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>100</td>
<td>156.9</td>
<td>238.4</td>
</tr>
<tr>
<td>1990</td>
<td>100</td>
<td>116.6</td>
<td>174.6</td>
</tr>
<tr>
<td>2000</td>
<td>100</td>
<td>103.4</td>
<td>150.8</td>
</tr>
<tr>
<td>2009</td>
<td>100</td>
<td>105.6</td>
<td>154.3</td>
</tr>
</tbody>
</table>

Note: 1) Wage differential by education level means relative wage index calculated under the assumption that the average monthly wage of male high school graduates equal 100.
Source: Ministry of Employment and Labor, Survey on Labor Conditions by Type of Employment, Various years.

On the other hand, the rapid expansion of higher education in Korea can be both an opportunity and a risk for the Korean economy. A highly educated population can be the source of sustained economic growth for Korea, since greater human capital can result in greater productivity in the workplace. However, better jobs need to be continuously generated to employ a highly educated population. In the past, workers with a college education were scarce in the Korean labour market, based on the wide wage gap from differences in the level of education. Up until now, the demand for highly educated workers was relatively strong, but the wages of entry-level college graduates has started to drop relatively. As the gap between the demand for and the supply of college graduates has gradually narrowed, new college graduates are finding themselves working in temporary jobs while their longer term employment prospects are deteriorating.

2) Distribution of Manpower by Region

In Korea, the distribution of human resources shows the difference between the national capital region and other regions. Most of what makes up Korea’s human resources - such as population, employees, and students – is crowded around Seoul. The population of the Seoul metropolitan area has continuously increased from 42.8%
in 1990 to 48.9% of the total population in 2010, while the population of other regions has decreased from 57.2% in 1990 to 51.1% 2010. This has led to an imbalance between Seoul and the local regions, since industrial and economic power is concentrated in the Seoul area. This means that the qualitative and quantitative level of human resources in the local regions has greatly suffered. Thus, this resulted in a social or economic gap between the national capital region and other regions.

**Figure 3.8 Population Spread by Region**

<table>
<thead>
<tr>
<th>Year</th>
<th>National Capital Region</th>
<th>Other Region</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>18,573,937 (42.8)</td>
<td>24,816,437 (57.2)</td>
<td>43,390,374 (100)</td>
</tr>
<tr>
<td>1995</td>
<td>20,159,295 (45.2)</td>
<td>24,394,415 (54.8)</td>
<td>44,553,710 (100)</td>
</tr>
<tr>
<td>2000</td>
<td>21,258,062 (46.2)</td>
<td>24,727,227 (53.8)</td>
<td>45,985,289 (100)</td>
</tr>
<tr>
<td>2005</td>
<td>22,621,232 (48.1)</td>
<td>24,420,202 (51.9)</td>
<td>47,041,434 (100)</td>
</tr>
<tr>
<td>2010</td>
<td>23,459,570 (48.9)</td>
<td>24,531,191 (51.1)</td>
<td>47,990,761 (100)</td>
</tr>
</tbody>
</table>

Source: National Statistics Office, Population and Housing Census, various years.

The concentration of population in the Seoul area has a lot to do with the distribution of industry in Korea. Indeed, about 46% of the firms and about 56% of all large enterprises were located in the Seoul area in 2009. Many SMEs are located in local regions while many of the LEs are located in the Seoul area. There were a larger number of employees in the local area compared to the Seoul area until the early 2000s. This trend reversed and over half of the workers are in the Seoul area. In 2009, workers
in the Seoul area accounted for 50.7% of total workers compared to 49.3% in the local area. Since the distribution of employees is more than that of the population, it would mean that the migration toward the Seoul area will continue in the future. The Seoul area is considered to have more employment opportunities than other areas, which has also incentivized students to enroll in universities or junior colleges in Seoul.

![Figure 3.9 Distributions of Workers by Region](image)

<table>
<thead>
<tr>
<th>Year</th>
<th>National Capital Region</th>
<th>Other Region</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>7,014,167 (49.7)</td>
<td>7,095,474 (50.3)</td>
<td>14,109,641 (100)</td>
</tr>
<tr>
<td>2002</td>
<td>7,249,289 (49.6)</td>
<td>7,359,033 (50.4)</td>
<td>14,608,322 (100)</td>
</tr>
<tr>
<td>2003</td>
<td>7,358,715 (50.0)</td>
<td>7,370,451 (50.0)</td>
<td>14,729,166 (100)</td>
</tr>
<tr>
<td>2004</td>
<td>7,397,396 (49.9)</td>
<td>7,421,358 (50.1)</td>
<td>14,818,754 (100)</td>
</tr>
<tr>
<td>2005</td>
<td>7,637,127 (50.4)</td>
<td>7,510,344 (49.6)</td>
<td>15,147,471 (100)</td>
</tr>
<tr>
<td>2006</td>
<td>7,804,537 (50.6)</td>
<td>7,631,229 (49.4)</td>
<td>15,435,766 (100)</td>
</tr>
<tr>
<td>2007</td>
<td>8,106,512 (50.8)</td>
<td>7,837,162 (49.2)</td>
<td>15,943,674 (100)</td>
</tr>
<tr>
<td>2008</td>
<td>8,282,861 (50.9)</td>
<td>8,005,419 (49.1)</td>
<td>16,288,280 (100)</td>
</tr>
<tr>
<td>2009</td>
<td>8,526,197 (50.7)</td>
<td>8,291,818 (49.3)</td>
<td>16,818,015 (100)</td>
</tr>
</tbody>
</table>

Source: Korea National statistic Office, Census on Establishments, various years.
In the national capital region, the proportion of students in tertiary education is smaller relative to the population and number of workers. The MEST regulates enrollment quotas of universities and colleges within the Seoul area. The enrollment quota is intended to redistribute the student age population to regional areas. However, the policy of regulating enrollment has not been in line with the labour market conditions, as seen in Figure 3.8 and Figure 3.9. As a result, what it has done in practice is to make the process of admitting students less flexible and not responsive to changing labour market conditions. This has intensified the competition for admissions in Seoul. The share of junior college students in the Seoul area is less than the share of university and polytechnic colleges. However, we had already seen in Table 2.1 that most of the post-secondary students are enrolled in junior colleges. Thus junior colleges outside of the Seoul area will likely face difficulty in maintaining enrollment rates due to the declining student age population.

**Figure 3.10 Student Spread by Region and Type of Education Institution (2010)**

<table>
<thead>
<tr>
<th>Region</th>
<th>National Capital Region</th>
<th>Other Region</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>University</td>
<td>537,730 (38.6)</td>
<td>854,137 (61.4)</td>
<td>1,391,867 (100)</td>
</tr>
<tr>
<td>Junior College</td>
<td>204,235 (41.3)</td>
<td>289,783 (58.7)</td>
<td>494,018 (100)</td>
</tr>
<tr>
<td>Polytechnic</td>
<td>6,013 (31.5)</td>
<td>13,100 (68.5)</td>
<td>19,113 (100)</td>
</tr>
</tbody>
</table>

Note: Polytechnic’s value contain 6- month to one year programmes.
Source: MEST, Statistical Yearbook of Education, 2010
As discussed, education policy is unlikely to have much of an impact on the distribution of employment and population in Korea; however, enrollment quotas may have a negative impact and cause more problems than they are worth, further worsening the problem of over-education.

3) Employment and Advancement of Post-secondary VET Graduates

The number of students graduating from junior colleges and the number of junior college graduates finding employment have been continuously declining recently. The percentage of junior college graduates with a job was 71% in 2004. In 2009, this figure increased to 82%. However, the figure dropped to 51% in 2010, since graduates sought work that provided health insurance benefits. Smaller and poorer firms tend not to provide health insurance. The decline in the employment rate between 2009 and 2010 means that many graduates are choosing to take irregular or temporary jobs. But even the firms able to provide health insurance are less competitive and thus able to only pay low wages. We can conclude that most junior college graduates can only manage to find a job at smaller and less competitive firms. Moreover, some junior college graduates choose to go on to university. In 2004, 7% of the graduates went on to universities. Since then, the percentage has stayed between 3% and 5%. Indeed, the decrease in the number of junior college graduates advancing to university indicates that advancement to higher education does not ensure finding employment since even university graduates face poor job prospects.

Table 3.12 Employment and Advancement Trend for Junior College Graduates

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of Graduate(A)</th>
<th>No. of Employed (B)</th>
<th>B/A</th>
<th>No. of Advanced into Higher Schooling</th>
<th>C/A</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Domestic</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Oversea</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Total(C)</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>190,033</td>
<td>97,717</td>
<td>51%</td>
<td>6,005</td>
<td>209</td>
</tr>
<tr>
<td>2009</td>
<td>199,421</td>
<td>162,608</td>
<td>82%</td>
<td>6,774</td>
<td>398</td>
</tr>
<tr>
<td>2008</td>
<td>207,741</td>
<td>167,526</td>
<td>81%</td>
<td>6,769</td>
<td>697</td>
</tr>
<tr>
<td>2007</td>
<td>215,040</td>
<td>173,804</td>
<td>81%</td>
<td>7,332</td>
<td>902</td>
</tr>
<tr>
<td>2006</td>
<td>222,973</td>
<td>177,364</td>
<td>80%</td>
<td>8,487</td>
<td>912</td>
</tr>
<tr>
<td>2005</td>
<td>228,336</td>
<td>177,919</td>
<td>78%</td>
<td>11,230</td>
<td>991</td>
</tr>
<tr>
<td>2004</td>
<td>226,886</td>
<td>160,906</td>
<td>71%</td>
<td>14,038</td>
<td>999</td>
</tr>
</tbody>
</table>


However, polytechnic colleges face a very different circumstance compared to junior colleges. In 2002, all of the polytechnic graduates were able to find a job in the labour
market. Although it has declined recently, the employment rate of polytechnic graduates is still high. In Korea, most of the firms seek out workers with skills gained through government training programs or other means. Korean firms are reluctant to directly invest in the education and training of workers because of future economic uncertainty and cost constraints. The skills learned at polytechnic colleges match well with the needs of firms.

In reality, the demand for tertiary education has continuously increased since the 1980’s; however, the employment rate among tertiary education graduates has been decreasing and their prospects of finding employment continue to deteriorate. Graduates of tertiary education are finding it increasingly difficult to get a job comparable to their level of education because of the skills shortage or skills mismatch. Korea is increasingly relying on the growth of the services industry. This is causing junior college graduates to increasingly find employment in the service industry instead of the manufacturing industry. Indeed, the ratio of workers with a post-secondary education in manufacturing has decreased from 22% in 2005 to 16% in 2009. In contrary, employment in the health and welfare service sectors has increased from 16% in 2005 to 22% in 2010.

In the current economic situation, a tertiary education is seen as a way of maximizing an individual’s opportunities of finding a stable and high paying job, instead of unstable and low paying jobs often associated with the service sector and SMEs.

Table 3.13 Employment Rate and Completion Rate of Polytechnic Colleges

<table>
<thead>
<tr>
<th>Year</th>
<th>Entrants (A)</th>
<th>Graduates (B)</th>
<th>Completion Rate (B/A)</th>
<th>Employment Candidate (C)</th>
<th>Employed (D)</th>
<th>Employment Rate (D/C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>7,895</td>
<td>5,604</td>
<td>71.0</td>
<td>5,206</td>
<td>4,650</td>
<td>89.3</td>
</tr>
<tr>
<td>2009</td>
<td>7,955</td>
<td>5,599</td>
<td>70.4</td>
<td>5,112</td>
<td>4,321</td>
<td>84.5</td>
</tr>
<tr>
<td>2008</td>
<td>8,980</td>
<td>6,576</td>
<td>73.2</td>
<td>5,122</td>
<td>4,620</td>
<td>90.2</td>
</tr>
<tr>
<td>2007</td>
<td>8,925</td>
<td>6,753</td>
<td>75.7</td>
<td>5,101</td>
<td>4,586</td>
<td>90.0</td>
</tr>
<tr>
<td>2006</td>
<td>8,925</td>
<td>6,149</td>
<td>68.9</td>
<td>4,713</td>
<td>4,294</td>
<td>91.1</td>
</tr>
<tr>
<td>2005</td>
<td>8,925</td>
<td>5,959</td>
<td>66.8</td>
<td>4,529</td>
<td>4,174</td>
<td>92.2</td>
</tr>
<tr>
<td>2004</td>
<td>9,250</td>
<td>6,489</td>
<td>70.2</td>
<td>4,309</td>
<td>4,265</td>
<td>99.0</td>
</tr>
<tr>
<td>2003</td>
<td>8,995</td>
<td>6,675</td>
<td>74.2</td>
<td>4,324</td>
<td>4,307</td>
<td>99.6</td>
</tr>
<tr>
<td>2002</td>
<td>8,555</td>
<td>6,193</td>
<td>72.4</td>
<td>4,019</td>
<td>4,019</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Polytechnics, 2011
Table 3.14 Employment of Junior College Graduates by Industry

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>16%</td>
<td>17%</td>
<td>19%</td>
<td>21%</td>
<td>22%</td>
</tr>
<tr>
<td>Medical and Welfare</td>
<td>22%</td>
<td>20%</td>
<td>18%</td>
<td>16%</td>
<td>16%</td>
</tr>
<tr>
<td>Wholesale &amp; Retail Trade</td>
<td>7%</td>
<td>8%</td>
<td>8%</td>
<td>9%</td>
<td>9%</td>
</tr>
<tr>
<td>Other Community, Repair &amp; Personal Service Activities</td>
<td>9%</td>
<td>9%</td>
<td>8%</td>
<td>7%</td>
<td>6%</td>
</tr>
<tr>
<td>Education</td>
<td>8%</td>
<td>7%</td>
<td>7%</td>
<td>7%</td>
<td>7%</td>
</tr>
<tr>
<td>Business Facilities Management and Business Support Service</td>
<td>9%</td>
<td>9%</td>
<td>10%</td>
<td>4%</td>
<td>3%</td>
</tr>
<tr>
<td>Construction</td>
<td>7%</td>
<td>7%</td>
<td>6%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Hotels &amp; Restaurants</td>
<td>5%</td>
<td>6%</td>
<td>6%</td>
<td>7%</td>
<td>7%</td>
</tr>
<tr>
<td>Professional, Scientific &amp; Technical Activities</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Arts, Sports &amp; Recreation Related Services</td>
<td>4%</td>
<td>5%</td>
<td>5%</td>
<td>3%</td>
<td>5%</td>
</tr>
<tr>
<td>Information &amp; Communications</td>
<td>3%</td>
<td>2%</td>
<td>2%</td>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td>Public Administration &amp; Defense; Compulsory Social Security</td>
<td>4%</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
<td>4%</td>
</tr>
<tr>
<td>Financial Institutions &amp; Insurance</td>
<td>2%</td>
<td>2%</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Transport</td>
<td>2%</td>
<td>3%</td>
<td>3%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Electricity, Gas &amp; Water Supply</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Real Estate and Renting &amp; Leasing</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Agriculture, Forestry, Fishing</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

IV. Operation of Post-secondary VET

1. Governance

1) Concepts and Definition⁹

As shown in the preceding chapter, junior colleges and polytechnic colleges, which are tertiary education institutions, are considered post-secondary VET. Therefore, the governance of post-secondary VET in Korea can be assessed as part of discussions on tertiary education. According to the OECD (2009a), the term governance needs to be defined in the context of tertiary education; while a topology of the governance system within tertiary education needs to be mapped out to provide an analytical framework. To define governance, we begin by asking the question: “who makes what decisions?” By this definition, governance could be defined as a complex web comprised of a legislative framework and the characteristics of institutions, and how they relate to the whole system, how financial resources are allocated to institutions and how they are accountable for the way funding is spent, as well as less formal structures and relationships which steer and influence behavior.

Clark (1983) proposed that the co-ordination of higher education is organized on a triangular space consisting of the three dimensions of government (from highly centralized state authority to less state intervention), market (with different degrees of influence of markets) and academic oligarchy (with varying degrees of influence of academic profession). Then, Clark’s triangle of co-ordination is reduced down to a two-dimensional relationship based on a “state control” model that is characterized by strong confidence in the capabilities of governmental actors and a “state supervising” model that emphasizes monitoring and feedback.¹⁰ More recently, Braun and Merrien (1999) proposed a governance typology which accounts for the administrative strategies of the “New Public Management” (NPM) or the “new managerialism”, which have characterized reforms in the governance of public services in OECD countries in the last two decades. According to their discussion, three models such as the triangle model, state-role model, and new managerialism model are able to mix

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⁹ This paragraph is based on Chapter 3 of “OECD, Tertiary Education for the Knowledge Society, Vol.1, 2009.

¹⁰ Vught (1989) reduces Clark’s triangle of co-ordination to a two-dimensional relationship between a “State control” model and a “State supervising” model summarized as follows by Gornitzka and Maassen (2000). The “State control” model (also called “rational planning” model) is characterized by strong confidence in the capabilities of governmental actors and true knowledge and the ability to make the best decisions. Also, these governmental actors try to steer an object by using stringent rules and extensive control mechanisms. They see themselves as omniscient and omnipotent actors able to steer a part of society according to their own objectives. In the “State supervising” model (also called “self-regulation” model) monitoring and feedback are emphasized. Crucial to this is the idea that a decision-maker should only pay attention to a small set of critical variables that should be kept within tolerable ranges. In this model, government is predominantly an actor which watches the rules of the game played by relatively autonomous players and which changes the rule when the game is no longer able to lead to satisfactory results (OECD, 2009).
with each other to form a cube shaped governance structure. They are distinguished by a tight or a loose administrative control of universities by policy-makers (procedural dimension) and a tight and loose goal-setting capacity of government in matters of education and research (substantive dimension). The third dimension relates to the “political culture” of countries concerning the role that higher education systems should play as part of the public service system (from “non-utilitarian culture” to “utilitarian culture”).

Also, Enders (2004) reviews higher education governance models, highlighting their increased complexity. He discusses the extension of conceptual models of higher education governance within three dimensions such as the existence of networks, the significance of global forces, and academic work and life at the micro-level. First, governance is now often used to indicate a new mode of governing with the existence of networks that is distinct from the hierarchical control model, a more cooperative mode where the state and non-state actors participate in mixed networks. According to this discussion, governance of post-secondary institutions is also strongly influenced by informal networks, collegial agreements and more process-oriented decision-making structures. Second, the significance of global forces is that the theory of political governance has so far dealt with political systems that have a clear identity, a clear boundary, and a defined membership and is incapable of accounting for the influences of globalization such as the European dimension which is becoming much more integrated into the mainstream national-level higher education policy. Marginson and Rhoades (2002) propose a “global agency heuristic” to conceptualize and shape comparative higher education research with regard to globalization. Their approach combines the meaning of “agency” as an established organization with its meaning as individual or collective action. Third, the microcosm of academic work and life, as pointed out by Enders (2004), highlights the importance of assessing the impact of changing modes of co-ordination in higher education on the academic workplace. Also, that more attention need to be paid to the relationships between the state and the VET profession given that understanding co-ordination within post-secondary VET systems cannot be reduced solely to state-institutional relationships.

It is also important to bear in mind that changes in the governance of post-secondary VET are taking place in the context of fundamental changes in the governance and management of general public service. Post-secondary VET reform is tied into more general public sector reform.

Another complexity is the multiplication of actors in post-secondary VET governance. Some responsibilities are delegated to intermediate bodies such as research councils or quality assurance agencies. Other organizations in different government levels (regional, local) and sectors (e.g. ministry of economic affairs, industry, labour) have reinforced their role in post-secondary VET. Further, external stakeholders (industry, business sector, employers unions, trade union) are being increasingly included in the consultation and decision-making processes within the network of managers (“steering through networks”). As such, new regimes of governance have emerged.

In the governance of post-secondary VET, the ultimate objective of educational authorities as the guardians of the public’s interest is to ensure that public resources are
efficiently utilized by post-secondary VET institutions in line with a country’s societal goals. This entails a mixture of many demands such as meeting standards in the quality of teaching and learning as defined in new ways such as achieving greater relevance from the perspective of learners and the needs of the labour market, ensuring skills development feeds into business and community development, and contributing to a country’s internationalization and international competitiveness. There is a tension between the pursuit of knowledge generation as a self-determined institutional objective and of a nation’s priority as defined in the aims and goals of post-secondary VET. The objective, from a governance point of view, is then to reconcile the priorities of the individual institutions and the broader social and economic objectives of countries. This entails determining how far the former contributes to the later as well as clarifying the degree of latitude the institution has in pursuing its own self-established objectives. The objective is to put arrangements in place which are effective and efficient in addressing national economic and societal needs. Governance systems should also support the traditional and fundamental objectives of post-secondary VET in promoting excellence through the creation, diffusion and maintenance of skills that are needed in the labour market.

2) Government Control

As the number of junior colleges in Korea has decreased rapidly after experiencing expansion until the early-2000s, driven largely by the proliferation of private junior colleges, the issue of governance has become more complex. This issue is essentially about public and private control, the extent of government intervention versus relying on market mechanisms. For a long time, Korean junior colleges have been governed under a top-down system. Despite efforts to accommodate differences among various institutions, the governance system tends on the whole to limit opportunities for flexibility and innovation within private and national/public institutions. However, market-oriented mechanisms have come to inevitably dominate junior colleges in Korea. The great majority of institutions are private. Students choose institutions and institutions choose students in a market-like system where supply and demand acts as powerful forces. Moreover, many of the funding policies support the market aspects of the system rather than the interests of the public. There will likely not be any opportunity to change the market-oriented tertiary education system in the near future. The only question remaining is whether the government works to enhance the positive market elements of the system, or whether it reigns in market elements in detrimental ways.

<Government Control by Regulation>

In Korea, the Education Law governs all junior colleges as well as all tertiary education institutions. According to this law, MEST (Ministry of Education, Science and Technology) sets policies on student enrollment quotas, qualification standards for instructors and faculty, curricula and degree requirements. MEST sets basic minimum requirements on admissions that tertiary education institutions must follow. The goal is to promote the independence of institutions and alleviate the burden of private tutoring
The current junior college system in Korea is dominated by private institutions, which expanded substantially during the 1980s and 1990s. MEST has regulated private institutions in a variety of ways.

First, the government has implemented a policy of “three cannots,” designed to promote equality and fairness: tertiary institutions cannot give their own entrance exams; they cannot give preference to some high schools over others, even though there are substantial differences; and they cannot admit students on the basis of their family household’s monetary contributions to the institution. In practice, these policies limit institutions in developing their own admissions standards and procedures. Over-reliance on a single, national admissions test, in a status-driven culture, not only places a disproportionate amount of burden on the lives of young people during their formative years, but it also distorts the distribution of talent within the society and across the labour market. Some students end up taking courses for which they have little interest or aptitude in, while others who have the potential to excel in their careers start off too often, regrettably, with a sense of failure. If instead universities and colleges could control their own admission policies, then they might develop specialties that would give prospective students more options from which to choose.

Second are quotas on enrollments for universities and junior colleges in the Seoul metropolitan area. These quotas are targeted specifically at universities and colleges within the Seoul area with the aim of redistributing the student population to areas outside of Seoul. But what it has done in practice is to make enrollments sticky, rather than responsive to changing labour market conditions. It has intensified the competition for limited spots in Seoul. However, this education policy is unlikely to contribute much to the distribution of employment and population within Korea.

Third are other regulations. The government has introduced limits on student-teacher ratios, with different ratios based on the field of study. Other regulations govern the length and term of educational programmes. There are regulations for the types of studies offered, conditions for re-admission, limitations on the ratio of day and night students, transfer programmes and the conferring of degrees, restricting research funds to experimental fields, procedures for appointing professors and visiting professors, and reporting requirements.

<Market-Oriented Mechanisms and Regulations>

To ensure the conditions necessary to support market-driven mechanisms, it is important to observe the functioning of information. Information on pricing is crucial for students or consumers to make rational decisions in the market. Information on junior college tuition fees is not publicly disclosed nor is any public agency set up to do so. MEST should disclose accurate information on tuition fees and other costs regularly. In addition, there are many other kinds of information that students could use to make rational decisions; information on job placement rates based on each field of study, potential job earnings of graduates, completion rates, and the results of institutional quality assurance assessments. These types of information would help the market work as it should. Such information based on the field of study would also allow students to judge the quality of specific departments. Students could have
To address this problem, decision-making in private junior colleges needs regulation. In particular, there seem to have been cases of fraud and embezzlement; in that, institutions founded by individuals, whose boards were composed largely of family members, had illegally extracted money from the institutions. The Korean government has let the institutions themselves address the crisis in tertiary education due to the declining student age population, except for institutions found to have broken the law.\(^\text{11}\) This type of approach to regulating tertiary education would be more flexible and developmental or a “soft-touch” approach to regulation. This kind of developmental regulation would require the MEST to engage in certain kinds of new activities. It would need to disseminate data that would be truly useful in providing students with information and in monitoring (but not controlling) quality. It would have to provide procedures for self-assessment and then discuss potential problems with individual institutions. Lastly, a qualification system would need to be created to outline requirements for different levels of qualification. This would require a transformation of how the MEST operates as we will discuss in the next chapter.

< Institutional Governance>

At the same time, public schools have been governed differently from private schools. Public junior colleges fall under the governance of MEST, which means that head administrators of a national junior college or polytechnic college are public employees of the ministry rather than the institutions. In contrast, private institutions have their own governing boards, which determine the overall priorities of the institutions and choose their presidents. In addition, polytechnic colleges funded by MOLE have their own boards and greater institutional autonomy than the public junior colleges that are controlled by the MEST. These are good examples showing that publicly-funded institutions need not be publicly-operated. Public schools can govern themselves and can develop innovative approaches to teaching and learning.

The transition to greater institutional autonomy will probably take a good deal of time, and the MEST may need to provide transitional support in the process. But the results should be stronger institutions able to pursue distinctive strategic directions and collaborate more fully on the international stage, resulting in a more diverse and responsive post-secondary system for Korea. Under a developmental or ‘soft touch’ approach to regulation, post-secondary institutions would be responsible for developing better data systems, for developing their own quality assurance mechanisms, and for carrying out the institutional self-assessments needed to report developments to prospective students, the public, and the MEST. In some ways, these are more demanding than the reporting requirements junior colleges now face. However, they would be oriented more toward improving quality than to constraining behavior, more to informing the market than to following MEST rules.

\(^\text{11}\) Recently, MEST made public the exit of two universities which were involved in a serious embezzlement scandal and were not admitting new students.
Polytechnics, which are subsidized by MOEL, compete directly with junior colleges, which are governed by MEST. The tuition fee for polytechnic colleges is roughly half of private junior colleges, giving them a competitive advantage. The rationale for the polytechnics is that there is a need for more vocational education to cope with a shortage of skilled workers in a particular trade. In addition, the polytechnics reportedly take a more practical, job-based approach to instruction while colleges are more focused on theoretical studies. This widens the divide between theoretical and practical instruction, rather than trying to bridge the two through co-operation between MEST and MOEL. But vocational education is currently being provided by junior colleges as well as some universities that have encroached on the territory of vocational teaching colleges. The lack of a substantial earnings advantage for associate degrees suggests that there isn’t a shortage of vocational education.

In some cases, the lack of communication among ministries may hamper the ability to develop coherent policies. One clear example is the effort to redistribute population and employment away from Seoul. This is an effort that can only be successful by first facilitating greater economic development in regions outside of Seoul, or building on their natural advantage. This for example could be facilitated by inducing firms to locate in regions outside of Seoul, and to utilize the local comparative advantages. To do this, it would require policy intervention by the Ministry of Knowledge Economy and other organizations responsible for regional development. If enough jobs could be created in the local region, then MEST could play a role in the expansion of post-secondary VET in the local regions to meet the potential skills demand. In 2003, MEST began the New University Regional Innovation (NURI) project to promote innovation in local regions through regional universities.

The developmental approach is intended to help develop the capacities of post-secondary VET institutions to enhance quality, to respond to the demands of students and labour markets, to enhance flexibility and diversity rather than uniformity, and to rely more on efforts to improve the functioning of market-based mechanisms in post-secondary VET. This approach of building capacity relies more on setting certain requirements intended to improve institutions in data collection, quality assurance mechanisms, institutional self-assessments, and qualifications framework. This approach is not intended to institute controls that limit what post-secondary institutions can do. It would rely on much more extensive discussion and consultation. In the same ways, it would encourage more communication and consultation among agencies within MEST, and between MEST and other governmental ministries, particularly for larger issues in post-secondary VET. In Korea, this role has been given to the Korean Council for College Education (KCCE). KCCE’s goal is to formulate and present polices on the development and operation of junior colleges to the government, as well as to facilitate some cooperation among junior colleges. In reality, KCCE has been carrying out research on educational systems, the entrance test system, the assessment or evaluation of junior colleges, development of curriculum and teaching methods, and policies dealing with tuition costs and funding.
The developmental approach is about providing more technical assistance to post-secondary institutions, helping them comply with new information and quality requirements. This in turn requires that implementers of this policy approach have real expertise and experience in post-secondary VET.

3) Internal Institutional governance

Institutional governance can be defined as “the formal and informal arrangements that allow post-secondary VET to make decisions and take action”. It includes both an external dimension – conditioning the relations between individual institutions and their supervisors – and an internal dimension in reference to the devolution of authority within post-secondary institutions. Internal institutional governance of post-secondary institutions relates to the forms of management at the systems level.

Private junior colleges have their own boards, which determine the overall priorities of the institutions and choose their presidents. Polytechnic colleges also have their own boards and greater institutional autonomy. Under a developmental approach of ‘soft touch’ regulation, junior colleges could be responsible for developing better data systems, for developing their own quality assurance mechanisms, and for carrying out institutional self-assessments. This information could then be provided to prospective students, the public, and the MEST. It relies more on improving the functioning of market-based mechanisms in the governance of junior colleges. It also depends more on extensive coordination between MEST and junior college institutions through discussions and consultations, rather than on a top-down system of regulation.

The private junior colleges in Korea are operated based on educational function and juridical foundation. The school policymaking body is composed of a board of directors and a chairman. The existing “private school law” gives the board authority to make decisions on the school’s finances including funding, property management, amendments to the articles of association, appointments, dismissals of faculty and staff, and other school management matters. Also, the board of directors tends to be appointed with the chairman’s family member and associates. Therefore, the chairman can exercise his or her full rights and has near absolute authority in decision making matters at most private junior colleges. The concentration of power at the seat of the chairman has led to cases of fraud and embezzlement in many institutions. In this sense, the management and operation of private junior colleges is based on a structure that...
gives great power to the school’s chairman and the board. Although private junior colleges have a council comprised of faculty and staff, it is mostly powerless.

The operation of polytechnic colleges is also based on an educational function. The governance of polytechnic colleges is composed of a board of directors and staff members which is presided by a chairman. The chairman of the board directors is appointed by the minister of MOEL. The chairman and its board oversee 11 polytechnic colleges and 34 campuses. The members of the board include scholars, researchers, and government officials. The school’s policies and operational matters are drawn up by the members of the school’s faculty and staff and then approved by the board. However, key decisions pertaining to issues such as the school’s finances and funding, and appointment of deans are made by MOEL after consulting the board of directors.

The interests of stakeholders such as employers or trade unions are not represented in the boards of institutions in post-secondary VET. The representation of stakeholders in the KCCE is also weak. The boards or councils of schools need to involve more stakeholders including representatives of colleges, employers both large and small, representatives of other ministries and other organizations (trade union and regional diversification). The members of the council or the board should include experts from different areas of post-secondary VET, that are able to consult with institutions, to amass information on practices in different institutions, to identify innovative and effective practices, and then to provide technical assistance to other institutions. The body of experts would also include data and evaluation specialists, to enhance the information available on quality and effectiveness. The council or board would take over several functions of the MEST or MOEL, except adding their administrative unit. So they should develop a framework for a social compact that defines the mission of different institutions and sets performance standards. As the Korean government faces the difficulty of having to reform tertiary education, these kinds of administrative and cultural changes can make up an important part of a new developmental approach to regulating the system for the future.

2. Funding and Incentive

1) Funding Concepts and Incentive Structure

Funding mechanisms are especially important to achieving better outcomes in post-secondary VET with relation to quality, efficiency, equity, and system responsiveness. This section reviews the principles of funding post-secondary VET and the empirical evidence assessing the impact of specific approaches to funding post-secondary VET in Korea. It includes overall funding strategies, mechanisms to allocate funds to individual post-secondary institutions, and strategies to assist students cover the cost of their education.

Economic theory supports government intervention in post-secondary VET to enhance efficiency and equity. Government intervention can increase efficiency in post-secondary VET but it can also ensure more equity in educational opportunities,
since an efficient allocation of resources is not necessarily far in the sense that a given social welfare function does not reach its optimal value. Then, the question is who should contribute to paying for the costs of post-secondary VET? Johnstone (2004) shows that the costs of tertiary education are typically shared between four principal groups: the government, parents and family, students, and individual donors. The cost-sharing arrangement for post-secondary VET is made up of the groups described above. Also, cost-sharing is often used to refer to the contributions of students and family relatives as opposed to the contributions of the government or taxpayers. In Korea, while the extent of cost-sharing is important and broadly uniform across the student population, the system for supporting students is somewhat underdeveloped. This leads the students and families to shoulder to a considerable financial burden. This reflects the pattern of growth experienced in tertiary education since the early 1980s, which allowed new tertiary institutions to open and to make tuition costs more affordable and adequate enough to fund the large increase in enrollments without any substantial increase in public funding. This pattern also reflects the enormous commitment of parents to the education of their children, the importance put on formal schooling and the pressures to increase schooling as the main route to achieving social status.

The means of financing education has an impact on how students decide which school to attend. One’s ability to finance education costs can affect one’s incentives to invest in human capital development, especially if the education cost is too burdensome. Then, the question is who will shoulder the burden of paying for an education? The costs of tertiary education are typically shared by the following principal groups: the government, family households, and individual donors. The government subsidizes tertiary education mostly through tax revenues. Households may share some of the costs of education by paying for school tuition or student living costs (e.g. students living at home while attending school). Households could rely on current income and savings or even borrow money to pay for the education. Funding from individual donors may also lower the cost by lowering the cost burden of the government or household, or by providing students financial assistance via grants and scholarships.

2) Expenditure and Tuition Fees

Expenditure is an important indicator of an institutions funding position while the cost of tuition is an important indicator of the education costs students and households

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13 The four principal groups are as follows: government (or taxpayers) subsidizes tertiary education mostly through tax revenues (e.g. taxation upon earnings, property, retail sales, general consumption); Parents and family members may bear some costs of tertiary education through the payment of tuition fees, or by covering some of the student living costs (e.g. by keeping the student at home). Parents or family members may cover these costs through current income, past savings, or borrowing. Students may bear part of the tuition and living costs through part-time employment earnings, past savings, non-repayable public financial assistance or borrowing; Individual donors may contribute to institutional budgets (reducing the amount that must be passed onto the government, parents or students) or financially assist some students through grants (OECD, 2009a).
have to bear. In Korea, the problem of shouldering the education cost is shared between the government and stakeholders (students or parents and tertiary education institutions). Korea is now faced with a crisis in tertiary education due to high tuition costs and low school age population, even though the advancement rate of tertiary education is high.

As a measure of cost for tertiary education, the OECD average based on expenditure per student is US$ 13,717. In Korea, the amount of expenditure per student is lower than the OECD average at only $ 9,081. Furthermore, the average spending for tertiary-type A schooling is USD 10,109 per student, while the spending for tertiary-B is $ 5,742 per student. In Korea, the cost of a junior college education based on expenditure per student is only about half of the cost of universities.14

**Figure 4.1 Annual Expenditure per Student by Tertiary Type (2008)**

![Graph showing annual expenditure per student by tertiary type](image)

Note: 1. Some levels of education are included with others.
2. Public institutions only (for Canada, in tertiary education only; for Italy, except in tertiary education).
Expenditure per student is equivalent USD converted using PPPs, based on full-time equivalents.

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14 Given that the duration and intensity of tertiary education vary from country to country or by tertiary, differences in annual expenditure on educational services per student do not necessarily reflect differences in the total cost of educating the typical tertiary student. In Korea, average duration and cumulative expenditure per student of tertiary studies in tertiary-type B is 2.07 years and $ 11,887, respectively; while that in tertiary-type A and advanced research programmes is 4.22 years and $ 42,658. Although we consider these to be average duration, spending per student is higher in the universities than in the junior colleges.
In Korea, public expenditure in education is relatively high, representing 7% of GDP (see education at a glance, OECD (2010)). Also, the share of expenditure for tertiary education was 2.6% of GDP in 2008, which is amongst the highest in OECD countries followed by the United States. It is a very high level compared to the OECD average of 1.5%. The public expenditure on educational institutions is only 0.6% of GDP. It is very low compared to other OECD countries, while private expenditure is the highest among OECD countries. This means that, in Korea, the education cost of tertiary education is not only very high, but students and households shoulder a larger burden of the cost.

**Figure 4.2 Expenditure on Educational Institutions as a Percentage of GDP (2008)**

Note: 1. Public expenditure only (for Switzerland, in tertiary education only; for Norway, in primary, secondary and post-secondary non-tertiary education only).

The high rate of students enrolling in tertiary schools has meant that more funding is needed to finance the tertiary education system. However, the amount of public funds provided by the Korean government for tertiary education is lower than other advanced countries. Views differ on the topic of funding, as some support increasing public funds for tertiary education while others believe more public funding will only result in more inefficiency. This matter is made worse by the poor quality of education at the tertiary level and persistent problem of unemployment. In addressing this issue, policy debate on government support of tertiary education has shifted. Policymakers are now suggesting that government support be given to households like professors and
students rather than the school.

In relation to the funding structure, the policy debate of how best to fund educational institutions should focus on a structure where the costs are shared by the public and private sectors, particularly at the tertiary level. The value of an education lies in its costs and benefits. Investments in education can generate substantial financial rewards. It has been shown that the attainment of education beyond compulsory schooling generates large returns for individuals and the public at-large. Examining the returns to the public is one measure of the benefits of individual’s investing in education and the effects of education policies that impact these investments. When considering if government action is needed to improve private rates of return to education, it is important to consider public returns as well as to have a complete picture of the benefits of education. Figure 4.3 shows private spending as a share of total spending on tertiary education. The table also shows private funding based on households and private entities. In Korea, the share of total private spending on tertiary education was 77.7%, where household expenditure and expenditure of other private entities accounted for 52.1% and 25.6% in 2008, respectively; while the proportion of public spending was only 22.3%.

**Figure 4.3 Distribution of Public and Private Expenditure on Tertiary Education (2008)**

As can be seen, the extent to which the cost of education is shared between the public and private sector becomes important. In Korea, most of the funding for
education in the private sector is shouldered by family households. Tuition and lecture fees are not only very high, but they are higher in junior colleges than in universities. As seen in Table 4.1, the percentage of tuition and lecture fees as a total of income was 69.1% for private junior colleges, while it was 52.2% for private universities in 2010. For private institutions, the burden of paying for tuition is higher in junior colleges than in universities. In contrast, the percentage of tuition of total income is not only higher in universities than in junior colleges, but it is also lower in national and public institutions than in private institutions. For national and public institutions, the percentage of tuition fee of total income is 27.3% for universities and only 9.9% for junior colleges. As we showed in Table 1.1, private institutions accounted for 94% of all junior colleges in Korea, and 85% for all universities. We can conclude that private junior colleges will likely face a funding crisis as the student age population continues to decline in the near future. In particular, junior colleges in the regional provinces will likely face financial difficulty as most students prefer to study in Seoul.

Table 4.1 Total Income and Tuition Fee  
(Unit: billion Won, %)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Income(A)</th>
<th>Tuition &amp; Lecturing Fee(B)</th>
<th>B/A</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>University</td>
<td>Junior College</td>
<td>University</td>
</tr>
<tr>
<td>2010</td>
<td>19,304</td>
<td>4,239</td>
<td>10,068</td>
</tr>
<tr>
<td>2009</td>
<td>17,680</td>
<td>4,045</td>
<td>9,743</td>
</tr>
<tr>
<td>2008</td>
<td>17,281</td>
<td>4,066</td>
<td>9,540</td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>University</td>
<td>Junior College</td>
<td>University</td>
</tr>
<tr>
<td>2010</td>
<td>4,708</td>
<td>91</td>
<td>1,283</td>
</tr>
<tr>
<td>2009</td>
<td>3,969</td>
<td>139</td>
<td>1,214</td>
</tr>
<tr>
<td>2008</td>
<td>3,749</td>
<td>148</td>
<td>1,188</td>
</tr>
<tr>
<td></td>
<td>National/public</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: MEST, Statistical Yearbook of Education.

Since 2008, tuition costs have increased significantly for both junior colleges and universities (see Figure 4.4). Tuition costs for private universities were estimated at about 7.4 million Won per student in 2010, while it was about 4.6 million Won per student for public universities. The cost burden for students attending private institutions is about double that of students attending public and national universities. Also, the difference in tuition costs between private and national/public junior colleges is very big. In the case of junior colleges, the tuition fee for private schools is about double that of public/national schools, while being lower than that of universities in general.

As such, tuition fee is an important element in funding junior colleges. This means that the funding structure of junior colleges depends on students and family households.
Therefore, many junior colleges are currently experiencing financial difficulty due to the fast declining student age population. Indeed, the sharp rise in tuition fees in Korea has become a major social issue. To address this problem, the Korean government has already allocated one trillion and five hundred billion Won to provide students financial support in paying for tuition this year. The Korean government also plans to differentiate financial support to students according to the level of income or wealth.

![Figure 4.4 Trend of Tuition Fee per Student](source)


### 3) Student Grants and Loans

The system of scholarships is also somewhat underdeveloped in Korea. As we have already shown above, most Korean students pay a high tuition fee, placing a considerable financial burden on students and households. High tuition fees may increase resources available to schools, but students with a low-income background are disproportionately burdened by having to pay high schooling costs without a public financial support system in the form of subsidies or loans to assist them. Thus, student grants or loans have an important role to play in giving individuals the ability to choose their education.

The policy approach of supporting students as a way to subsidize schools may help to increase the competitiveness of Korea’s tertiary education. Since student aid that also covers living costs can be a substitute for additional work income, public subsidies may promote educational attainment by enabling students to work less. In Korea, total direct public spending for schools accounted for 85.2% of total public expenditures on
education in 2008. Public education subsidies to private entities were 14.8%. Financial aid to students in form of loans and scholarships was 11.5%. In Korea, financial assistance to students is low compared to the OECD average. The total amount of scholarships and grants to households as a share of total public expenditure was 6.0% in 2008, while student loan as a share of total spending was 5.4%. The share of transfers and payments to private entities amounted to only 3.3%. In Korea, public subsides is very low compared to the OECD average.

Figure 4.5 Public Subsidies for Tertiary Education (2008)


Recently, the amount of scholarships or grants in Korea has been rapidly increasing. Until 2008, the amount of scholarships granted to junior college students totaled only a third of the amount granted to universities per student. But the amount of scholarships granted to junior college students increased significantly, reaching similar levels given to university students in 2010. The percentage of students that received grants was only 3.9% in junior colleges and 6.5% in universities in 2000. This has significantly increased, reaching 30.5% in junior colleges and 21.7% in universities in 2010, on the back of efforts by the Korean government to expand financial assistance for students with low income background. The Korean government increased the amount of public scholarships for junior college students to enhance post-secondary VET.
Table 4.2 Scholarships per student

<table>
<thead>
<tr>
<th>Year</th>
<th>Junior College</th>
<th>University</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Amount per student</td>
<td>rate of benefit</td>
</tr>
<tr>
<td>2000</td>
<td>3,266</td>
<td>3.90%</td>
</tr>
<tr>
<td>2005</td>
<td>5,256</td>
<td>4.47%</td>
</tr>
<tr>
<td>2006</td>
<td>6,424</td>
<td>5.29%</td>
</tr>
<tr>
<td>2007</td>
<td>6,788</td>
<td>6.25%</td>
</tr>
<tr>
<td>2008</td>
<td>7,161</td>
<td>6.63%</td>
</tr>
<tr>
<td>2009</td>
<td>15,420</td>
<td>14.83%</td>
</tr>
<tr>
<td>2010</td>
<td>33,149</td>
<td>30.54%</td>
</tr>
</tbody>
</table>

Note: rate of benefit = (the number of students received grants or scholarships) / (the number of resisted students)*100.
Source: Korea Council of University Education.

Student subsidies are divided into two types: scholarships and exemptions from paying tuition. In Korea, most of the support to students is in the form of exemptions from paying tuition, while the total of all types of subsidies is increasing rapidly. The total amount of subsidies to junior college students both in grants and exemptions increased from 481.3 thousand Won in 2005 to 1,165.5 thousand Won in 2010. The amount subsidies to university students increased from 664.4 thousand Won in 2005 to 1,217.7 thousand Won in 2010. The total amount of tuition exemptions per student in junior colleges increased from about 428.8 thousand Won in 2005 to about 785 thousand Won in 2010, while the amount for universities increased from about 515 thousand Won in 2005 to 860.4 thousand Won in 2010. Until 2008, tuition fee exemptions accounted for most of the support given to students.

Table 4.3 Scholarships and Tuition Fee Exemption

<table>
<thead>
<tr>
<th>Year</th>
<th>Scholarships</th>
<th>Tuition Fee Exemption</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Government</td>
<td>Local Governments</td>
<td>Private Foundations</td>
</tr>
<tr>
<td>2010</td>
<td>302.7</td>
<td>4.4</td>
<td>24.4</td>
</tr>
<tr>
<td>2009</td>
<td>121.7</td>
<td>4.2</td>
<td>28.3</td>
</tr>
<tr>
<td>2008</td>
<td>46.8</td>
<td>3.6</td>
<td>21.2</td>
</tr>
<tr>
<td>2007</td>
<td>40.8</td>
<td>3.9</td>
<td>23.1</td>
</tr>
<tr>
<td>2006</td>
<td>42.6</td>
<td>4</td>
<td>17.6</td>
</tr>
<tr>
<td>2005</td>
<td>35.1</td>
<td>2.3</td>
<td>15.1</td>
</tr>
<tr>
<td>2010</td>
<td>274.7</td>
<td>9.6</td>
<td>73</td>
</tr>
<tr>
<td>2009</td>
<td>160.4</td>
<td>4.4</td>
<td>70.2</td>
</tr>
<tr>
<td>2008</td>
<td>108.1</td>
<td>5.8</td>
<td>72.8</td>
</tr>
<tr>
<td>2006</td>
<td>100</td>
<td>2.9</td>
<td>60.4</td>
</tr>
<tr>
<td>2005</td>
<td>90.3</td>
<td>2.1</td>
<td>57.1</td>
</tr>
</tbody>
</table>

Source: MEST, Statistical Yearbook of Education.
However, the percentage of tuition fee exemptions as a total of subsidies decreased from 89.1% in 2005 to 70.3% in 2010. The percentage for universities decreased from 77.5% in 2005 to 70.1% in 2010 (See Figure 4.6). Also, the amount of student scholarships provided by private foundations increased from 15.1 thousand Won in 2005 to 24.4 thousand Won in 2010 in the case of junior colleges, while it increased from 57.1 thousand Won in 2005 to 73 thousand Won in 2010 in the case of universities. This decline in the share of tuition fee exemptions is due to the fact that the amount of scholarships has increased relative to the amount of tuition fee exemptions. The rise in student scholarships has been driven by government subsidies. Despite increases in publicly funded scholarships, the amount of public subsidies remains small while the system of financially supporting students remains underdeveloped in Korea.

**Figure 4.6 Percentage of Scholarships and Tuition Fee Exemptions**

![Percentage of Scholarships and Tuition Fee Exemptions](image)

Source: MEST, Statistical Yearbook of Education

On the other hand, the amount of student loans has also increased recently, which has been accompanied by an increasing number of students with student loans. The share of student loans from total tuition costs in junior colleges increased from 15.9% in 2006 to 22.5% in 2010, while it increased from 12.2% in 2006 to 15.3% for universities in 2010. The ratio of students in junior college getting student loans is rapidly increasing, largely due to a sharp increase in tuition costs over this period. The amount of student loans increased significantly after the introduction of the income contingent loan scheme in 2009.

In Korea, commercial banks also offer financial assistance through student loans, which are subsidized and/or guaranteed by the government. Some of the eligibility criteria for financial assistance include a maximum age limit of 55, the duration of the
loan must be equivalent to the duration of the program, and repayment of loans begins two years after completion of studies.

Table 4.4 Percentage of Loan on Expenditure and Ratio of Students with Loans
(Unit: Million Won, %)

<table>
<thead>
<tr>
<th>Year</th>
<th>Junior College</th>
<th>University</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Student Loan</td>
<td>Ratio of Benefiter</td>
</tr>
<tr>
<td>2010</td>
<td>732,018</td>
<td>43.35%</td>
</tr>
<tr>
<td>2009</td>
<td>667,043</td>
<td>38.46%</td>
</tr>
<tr>
<td>2008</td>
<td>623,418</td>
<td>35.51%</td>
</tr>
<tr>
<td>2007</td>
<td>573,988</td>
<td>33.99%</td>
</tr>
<tr>
<td>2006</td>
<td>415,966</td>
<td>26.94%</td>
</tr>
</tbody>
</table>

Note: Ratio of Benefiter = (the number of student that make a loan)/the number of the enrolled student) *100.
Source: Korea Student Aid Foundation.

On the other hand, scholarships in junior colleges as a total of tuition costs were 18.8% in 2010, while student loans were 24.9%. Both shares have increased relatively fast since 2006 when scholarships accounted for 11.6% of total tuition costs and loans accounted for 16.3% of total tuition costs. In terms of as a share of tuition costs for universities, scholarships were 14.9% and loans were 17.9% in 2010. As both scholarships and loans as a share of total tuition have increased recently, it would seem that students have become more dependent on loans and government support to pay for higher tuition costs.

Table 4.5 Size of Scholarships and Loans on Tuition Fee
(Unit: Million Won, %)

<table>
<thead>
<tr>
<th>Year</th>
<th>Tuition &amp; Lecturing Fee (A)</th>
<th>Scholarship &amp; Tuition Fee Exemption (B)</th>
<th>Student Loan (C)</th>
<th>B/A</th>
<th>C/A</th>
<th>(B+C)/A</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Junior College</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>2,937,982</td>
<td>551,574</td>
<td>732,018</td>
<td>18.77%</td>
<td>24.92%</td>
<td>43.69%</td>
</tr>
<tr>
<td>2009</td>
<td>2,924,745</td>
<td>421,397</td>
<td>667,043</td>
<td>14.41%</td>
<td>22.81%</td>
<td>37.21%</td>
</tr>
<tr>
<td>2008</td>
<td>2,960,748</td>
<td>352,922</td>
<td>623,418</td>
<td>11.92%</td>
<td>21.06%</td>
<td>32.98%</td>
</tr>
<tr>
<td>2007</td>
<td>2,723,830</td>
<td>333,566</td>
<td>573,988</td>
<td>12.25%</td>
<td>21.07%</td>
<td>33.32%</td>
</tr>
<tr>
<td>2006</td>
<td>2,550,035</td>
<td>295,749</td>
<td>415,966</td>
<td>11.60%</td>
<td>16.31%</td>
<td>27.91%</td>
</tr>
<tr>
<td></td>
<td>University</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>11,350,394</td>
<td>1,694,856</td>
<td>2,034,067</td>
<td>14.93%</td>
<td>17.92%</td>
<td>32.85%</td>
</tr>
<tr>
<td>2009</td>
<td>10,956,520</td>
<td>1,351,711</td>
<td>1,854,883</td>
<td>12.34%</td>
<td>16.93%</td>
<td>29.27%</td>
</tr>
<tr>
<td>2008</td>
<td>10,727,943</td>
<td>1,199,626</td>
<td>1,725,152</td>
<td>11.18%</td>
<td>16.08%</td>
<td>27.26%</td>
</tr>
<tr>
<td>2007</td>
<td>9,677,019</td>
<td>1,081,707</td>
<td>1,555,557</td>
<td>11.18%</td>
<td>16.07%</td>
<td>27.25%</td>
</tr>
<tr>
<td>2006</td>
<td>8,894,267</td>
<td>921,382</td>
<td>1,209,756</td>
<td>10.36%</td>
<td>13.60%</td>
<td>23.96%</td>
</tr>
</tbody>
</table>

As discussed above, the cost of tuition at tertiary schools is high and a relatively small proportion of students benefit from public financial support. Among OECD countries, Korea ranks low in terms of the level of public spending in education as a share of GDP, which is one of the reasons for the small role student loans play in education. In Korea, the cost burden of a tertiary education is largely shouldered by the student’s family household. Moreover, private junior colleges, which account for about 94% of all junior colleges, are facing financial difficulty due to the fast decline in the student school age population. This is expected to only worsen in the future.

4) Other Government Subsidies

The amount of government support for junior college students has rapidly increased based on the expansion of grants and loans. The total amount of government support was 596.9 billion Won in 2011, and about 15% of total expenditure was allocated for junior colleges. Also, MEST provided 66.4% of total government support, or 395.4 billion Won, while other ministries and local governments accounted for 21.9% and 11.7%, respectively, of total government support. But this indicates that the amount of support provided by the government is low compared to OECD countries as seen in Figure 4.5.

Table 4.6 Size of Government Support (2011) (Unit: Ten Million Won, %)

<table>
<thead>
<tr>
<th></th>
<th>MEST</th>
<th>Other Ministries</th>
<th>Local Governments</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount of Subsidies</td>
<td>3,954</td>
<td>1,313</td>
<td>699</td>
<td>5,969</td>
</tr>
<tr>
<td>Ratio of total amount</td>
<td>66.4</td>
<td>21.9</td>
<td>11.7</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: MEST, internal document (2011)

On the other hand, except for scholarships and grants, the total amount of MEST’s subsidies was 304.2 billion Won in 2011.15 Closely examining MEST’s subsidies show that the Project for Strengthening Educational Capability (PSTEC) accounted for the greatest share with 85.4% of the total amount. PSTEC was introduced in 2008. The financial support to junior colleges is formula based so that the government could enhance quality assurance by providing government financial support based on performance in education. This funding scheme was also expected to increase the autonomy of the institutions in managing their finances.16 The rest of MEST’s subsidies are used to support junior college programmes. However, the size of the financial support is very small.

15 Per the Korea Council of College Education, the amount of MEST’s subsidies totaled 170.4 billion Won in 2001, 167.8 billion Won in 2005, and 212.051 billion Won in 2008.
16 This formula based funding scheme depends on two indicators: the performance and the given condition. The performance indicator includes three indexes such as employment rate, student supplement rate, and the rate of return on industry-school cooperation. The indicator on the given condition includes three indexes such as the full-time faculty, the restoration rate of education costs, and the payment rate of grants.
Table 4.7 Composition of MEST Subsidies to Junior Colleges

<table>
<thead>
<tr>
<th>The items of subsidy</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strengthening Educational Capability Project</td>
<td>2,600(85.4%)</td>
</tr>
<tr>
<td>Enhancing Institutional Autonomy</td>
<td>133 (4.4%)</td>
</tr>
<tr>
<td>Learning Global Practices</td>
<td>50 (1.6%)</td>
</tr>
<tr>
<td>Promoting Industry-School Cooperation</td>
<td>133 (4.4%)</td>
</tr>
<tr>
<td>Overseas Study Program</td>
<td>30 (1.0%)</td>
</tr>
<tr>
<td>Strengthening Engineering Training</td>
<td>96 (3.2%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3,042 (100%)</strong></td>
</tr>
</tbody>
</table>

Source: MEST, internal document (2011)

3. Quality Assurance

Quality assurance can be broadly defined as the “process of establishing stakeholder confidence that the provision (input, processes and outcomes) fulfils expectations and measures up to threshold minimum requirements” (OECD, 2009). This definition underlines the various aspects of quality assurance, which relate to inputs, processes and outcomes in post-secondary VET. But the process-oriented nature of carrying out quality assurance also has a dynamic dimension where quality assurance not only seeks to ensure a minimum standard of quality at a point in time, but also aims at improving the quality of post-secondary VET over time.\(^\text{17}\)

1) Direction of Quality Assurance in Korea

Quality assurance in Korea relies largely on its system of accreditation, where different institutions are accredited or evaluated by the Korean Council for College Education (KCCE). The accreditation of junior colleges by the KCCE is voluntary, and it is unclear what advantage there is to being accredited. There have been criticisms of

\(\text{\textsuperscript{17}}\) Harvey and Green (1993) have attempted to construct a multi-dimensional matrix of quality focusing on five key aspects: Exception, where quality is defined in terms of excellence, passing a minimum set of standards; Perfection, with quality focusing on the process and aiming at zero-defect; Fitness for purpose, where quality relates to a purpose defined by the provider; Value for money, where quality focuses on efficiency and effectiveness by measuring outputs against inputs; and Transformation, where quality conveys the notion of a qualitative change that enhances and empowers the student. On the other hand, Sachs (1994) reduces down Harvey and Green’s multiple views of quality into two broad types: Quality Assurance for Accountability, characterized by external locus of control associated with centralized administrative structure and external auditors measuring quantitative indicators of success; and Quality Assurance for Improvement characterized by an internal locus of control and associated with facilitative administrative structures which use peer review to assess more qualitative indicators of success.
the existing system in its ability to deliver quality assurance. One is simply that agencies are being accredited without a coherent framework. Another is that accreditation, which is largely voluntary, lacks any legal basis. A third is that the results are not particularly transparent, and provide the public, especially prospective students and employers, with no real information about the quality of institutions or of the individual departments in them. Moreover, employers have noted that the process of peer review involves professors assessing institutions, who are unlikely to know much about employers and the community. As no institution has ever lost its accreditation, there is no demonstration of the application of quality standards in the eyes of the public.

The market oriented mechanisms can assure some quality through the students and employers. However, there is a lack of basic information on quality and incentive to improve in Korea, because the demand for tertiary education is so strong. So market forces are by themselves inadequate to enhance quality, particularly in a system where there is so much variation. Several priorities should govern the establishment of a national quality assurance framework. The first is that quality assurance should become a mechanism of enhancing quality, rather than simply enforcing compliance with regulations and allowing institutions to misuse the system or misstate their quality. This means that a quality assurance agency needs to be able to provide consultation and technical assistance as well as short-term funding for institutions with inadequate levels of quality so that they can improve rather than simply try to avoid punishment (W. Norton Grubb, et. al, 2009). Korea needs to consider the following five factors in formulating a market-oriented quality assurance framework.

First, a national quality assurance framework and its governing body should embody at least five elements. One is the specification of accrediting methods, which means standardizing self-assessments, having differentiated reviews, and disclosing the results of accreditation assessments. This would allow the mechanism to be transparent and would identify the areas which institutions seeking accreditation should improve. Finally, a follow-up mechanism to measure progress on enhancing quality should be instituted.

Second, a national quality assurance framework could specify the elements of institutional quality assurance mechanisms. The specific policies would then be developed by individual institutions, but they would be subject to periodic audits by the national agency. This would at the minimum suggest the kinds of activities that all tertiary institutions should undertake, in place of the current situation where institutional practices to improve quality are so varied.

Third, the national agency could develop data requirements for measuring quality, in hopes of generating information that would be useful to prospective students, employers, and other stakeholders. These might include both input measures like faculty-student ratios and the proportion of part-time faculty, and outcome measures like the percentage of graduating students, employment rates (accurately measured), earnings patterns, pass/fail rates on licensing exams, and other measures of learning and employment, specific to a field of study (rather than institution-wide) so that variations within as well as among institutions could be better understood.
Fourth, the national agency could develop procedures that, in place of the current one-size-fits-all approach, concentrate on monitoring and improving those institutions most in need of improving their quality. This might mean, for example, a system of priorities where institutions considered to be of lower quality undergo the accreditation process, or a system where some institutions are monitored more frequently than others. Finally, quality assurance could be developed so that they can be understood and approved by international partners. There is a great deal of international debate on quality assurance and its procedures, and its emphasis change very quickly. It is important for the development of Korean post-secondary VET that such international debate and standards be monitored, with increasing interaction with international developments at all levels of quality assurance, in order to be part of discussion on best practices.

2) Policies for Quality Assurance

The Korean government has driven three types of policies such as information disclosure, funding, and accreditation. First, MEST started information disclosure in 2008, and it aims to induce tertiary institutions to ultimately improve their educational quality by enhancing the function of the education market. Information disclosure is able to help students choose the right school for them and their field of study as well as allowing employers to select new workers. Schools disclose information showing the rate of collaboration between industries and school faculty as well as the employment rate of their graduates, reducing the possibility of a skills mismatch in the labor market. However, the disclosed information at the time does not reduce the transaction cost of learning skills.

Second, formula based funding was introduced by MEST in 2008. The system plays a role in promoting improvement in quality of education as government support is differentiated according to the education performance and condition. As we have shown in Table 4.7, the formula based funding for strengthening education capability accounts for most of MEST’s subsides. However, since the amount of the government’s total subsides is only 6.1% of total income in junior colleges, the effect of the formula based funding scheme is slight.

Finally, there are three policies in regards to accreditation. The first policy is that MEST supports and is committed to KCCE. The Korean government designated KCCE as the agency for assessment and accreditation in 2010, with the goal of enhancing the competitiveness and accountability of junior colleges. The assessment and accreditation examines nine parts including: school’s vision and development plan, education method, co-operation between college and industry, students, teachers, literary and information, management and funding, equipment and facilities, and accountability and quality - containing 72 evaluation elements. However, the

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18 Condition indexes include factors like the retention rate of full-time faculties, the transferring rate of education cost, number of students on scholarships, and tuition costs. The Performance indexes include factors like employment rate, enrollment rates, and the profit rate of industry-school collaboration.
evaluation of junior colleges is still under way. Polytechnic colleges use an index to
assess each campus and programmes. The indicators include employment rate, training
results, the degree customer satisfaction, and so on. Second is the expansion of the
Technical Accreditation Commission (TAC) in junior colleges. TAC is the system that
evaluates and accredits technical or engineering programmes in junior colleges. In
particular, TAC aims to promote engineering at junior colleges to spur technology
development and innovation to meet the needs of industry. Third is World Class
College (WCC). Junior colleges can be designated as WCCs if they show outstanding
performance in indicators such as employment rate, scholarship, and faculties etc.
Junior colleges designated as WCCs can be rewarded with government subside.

Such policies for quality assurance have been partially implemented in Korea. If
Korea adopted a national framework for quality assurance, that would require junior
colleges to collect appropriate data, this may lead poorly performing private colleges to
reform and improve their quality or exit altogether. Similarly, institutions that are
inefficient because they are operating below capacity may be forced to pursue
consolidation. In essence, an appropriate quality assurance framework would provide
the incentives for institutions to operate in optimally, which seems preferable and more
consistent with taking a developmental approach to regulation, as opposed to heavy
government regulation that would result in messy battles with private institutions.

4. Partnership and Collaboration

1) Workplace Training

According to the OECD (2009a), there are four major advantages, from both the
student and employer point of view, to promoting education and training through on-
site training rather than VET institutions. First, workplace training can offer a high-
quality learning environment, allowing students to acquire practical skills on the latest
technology and machinery and under the supervision of employees familiar with the
most recent methods and technologies; it also allows them to develop necessary skills
for the workplace, such as dealing with customers. Second, it facilitates a two-way
flow of information between potential employers and employees, making recruitment
of potential employees much more effective and less costly. Third, employer provision
of workplace training provides a signal that a VET programmes provide value to the
labour market. Fourth, trainees in the workplace can make productive contributions.
All of these advantages apply to a structured and substantive element of workplace
learning in a vocational programme – similar to apprenticeships.

In Korea, workplace training is not systematically provided in vocational
programmes, and quality standards for workplace training are weak. Students of junior
colleges generally obtain practical training during the last four weeks of their training.
However, all students do not take part in this. There are only a few places in Korea
where VET students can develop practical skills in the work-place. Current incentives
to induce firms to directly offer workplace training programmes are weak. Post-
secondary VET students in Korea learn practical skills primarily in school workshops
and only occasionally in the workplace. When workplace training does exist, its form, duration and quality vary highly. Only a small percentage of junior college curriculums are specialized by job type. In the junior colleges, 50% of the class hours should generally be specialized courses (75% to 85% of the total course credit) and should be composed of “practice” and “experimentation”. In practice, each institution determines the amount of practical training offered. There are many different types of cooperative arrangements between junior colleges and industry. Although Korea has launched initiatives to improve school-industry co-operation and to increase the provision of workplace training, they have not always achieved the expected outcomes.

The quality of workplace training is sometimes poor, and quality assurance is lacking. There is no statutory framework provisioning the rights and duties of the different parties involved. Individual VET institutions decide on the appropriate type of workplace training. As this is often not formally a part of education programmes, it may not be easy to distinguish between a period of practical training and employment in industry. Many high school VET students have enrolled in tertiary education after having been dissatisfied with the work environment and discouraged by their workplace experience. Also, the workplace training programme that is coordinated between local VET institutions and industry may be biased towards the needs of a specific firm, which would prepare students mainly to work in that given firm. It is not clear how well the interests of a few local companies and individual VET institutions correspond to the needs of the workers or the labor market in general. A fragmented and unclear system also imposes additional costs on students by increasing the risk of students making a poor career choice. In Korea, household spending on education is substantial in comparison to other OECD countries and errors are very costly (OECD, 2009a).

The Korean labour market gives employers little incentive to train employees. High employee turnover rates also reduce the incentive of employers to provide workplace training to trainees and apprentices, since the firms lose on their investment if workers move to another firm. In addition, firms may lack training capacity and culture that can be harnessed for initial training. The two-year military service requirement for all males is an additional disincentive, as companies cannot hire male workers who have the necessary training since they must serve in the military.

There are apparently no national funding arrangements for companies that provide training to students in early VET. The Employment Insurance System (EIS) is only available to firms that train their own employees; companies providing training to students in post-secondary VET are not eligible where financial incentives for workplace training are provided by the government. EIS are targeted at schools, not to companies. As a result, there is an expectation that individual VET institutions should bear the costs of workplace training. This expectation is greater in Korea than in other countries reviewed. For example, VET institutions that co-operate with firms are expected to cover the cost of buying specialized equipment and materials relevant to the firms’ production methods and to provide firm-specific training to students prior to their workplace training. The advantage of the partnerships with the polytechnic schools is that the polytechnic schools have purchased the most recent and expensive machines for training purposes. However, the overall picture may be mixed.
2) Collaboration between Industry and VET Institutions

Collaboration and exchange between VET institutions and industry can help to enhance VET in the workplace. They can be used to improve and maintain familiarity with the workplace among instructors in VET institutions. Exchanges can also develop the pedagogical skills of workplace instructors, which in turn might help to foster people trained with the right techniques within a firm who might at some point work as instructors in VET institutions. This would promote flexible career pathways between industry and VET institutions, and would help to solve the recruitment difficulties and to address the challenge of in-service training provision.

While post-secondary VET institutions often want to improve the familiarity of their instructors to the workplace, industry often puts more importance on equipping the supervisors of apprentices and trainees with the necessary pedagogical skills. Supervisors play a key role; in that, they provide instruction on practical skills and theoretical knowledge to help their apprentices and trainees get used to the management of apprentices and trainees. Importance is put on the school’s ability to provide both theoretical vocational education and practical training. In some post-secondary VET programmes, students may participate in workplace training through collaborations between schools and local employers.

Unlike many other countries, Korea does not have many organizations that employers use for consultation on post-secondary VET policy, on curricula, or on the size and mix of VET provision in high schools at the tertiary level. The sector councils recently set up by the government play a limited role in policy formation and their responsibility does not extend to high school VET and polytechnics. Trade unions are not currently represented in the sector councils. The Korea Chamber of Commerce and Industry (KCCI) also are not involved very much in post-secondary VET. Indeed, educational instructions visited by the team showed little linkage to the local chambers of commerce and industry. Junior college institutions create ad hoc partnerships with local firms. However, there is no broad framework to ensure that the VET system provides the skills employers need and to facilitate workplace training while ensuring that students also learn transferable skills. In Korea, the VET institution-industry network is unstable and informal, because the role of VET institutions varies according to the shifting employment policies of enterprises.

Korean society holds academic knowledge in high esteem. Despite initiatives to link VET institutions to industry, VET institutions often tend to be largely academically driven. In Korea, junior colleges are more concerned with teaching theoretical knowledge to students. This gives industry limited room to engage with and influence post-secondary VET. These apparent problems might not be serious if the labour market was working smoothly, but companies appear dissatisfied with the level of skills acquired by new employees. By comparison with other OECD countries, the risk of unemployment for young people is high relative to older workers. Indeed, the rate of inactivity among the population 15-to-29-year-olds is slightly above the OECD average (OECD, 2007). This suggests that Korea’s education and training system may not be meeting the needs of the labour market as well as it should. It is also a fact that employers are not actively engaged in VET, often being involved only locally and in a
piecemeal way. Moreover, the perception of many VET institutions not being academically oriented is also an obstacle to further involvement of industry. These features are associated with the weak labour market outcomes of post-secondary VET.

In Korea, employment prospects are better for people with a good education and skills. At the same time, opportunities for further training and career development once employed are limited. Many companies cannot afford to provide training, while high turnover among employees discourages them from investing in their workers. More generally, a firm’s motivation to invest in VET depends on characteristics such as its size, structure and methods of production. Low-technology firms that are labor intensive and rely on low cost labor tend to employ workers on fixed-term contracts. Those firms tend to invest less in skills development relative to companies with highly skilled workers and new technologies.

Also, professors or trainers in post-secondary VETs have an important function in helping to meet labor market needs, because they have to renew their teachings in line with labor market needs. Generally, it is known that the quality of teachers is one of the key factors that support effective learning. Interchange and partnership between post-secondary VETs and industries reinforce the pedagogical ability of professors or instructors, who have to cope with the quickly changing requirements of modern industry by continuing to advance their knowledge and skills. The facility to convey a practical skill is higher than the ability to exercise it. But this can be attained by improving the familiarity of instructors with the workplace or industry. In Korea, the qualifications required to practice as a professor or instructor is higher for vocational professors than for instructors. Also, a pedagogical course is an important part of delivering vocational training and education; however, the case of industrial experts becoming a professor or instructors is very rare. The professor or instructor tends to spend most of their lives in education, so their real world expertise of the workplace or the labor market is limited. Thus, VET programs are biased towards the labor market needs.

On the other hand, the objective of work-related curriculum that results from collaborative programs between industry and educational institutions is to make post-secondary VETs be more responsive to the needs of industry. One of the key factors in achieving excellence in post-secondary VETs would be to make curriculums more relevant by meeting the requirements of industries and by developing requisite capabilities of students. In Korea, "Customized Education" that Yeungjin Junior College is delivering is based on a work-related curriculum. Customized Education provides general technical training while emphasizing the particular skills needed by industries. This is achieved through cooperation between the college and industries, which results in field-centered activities and training to complement and reinforce classroom learning (www.yjc.ac.kr). This program allows students to concentrate on acquiring required skills, producing technicians who have work experience without on-the-job training. Also, firms that participate in collaborative programs are able to save OJT expenses and training time for new employees. However, these types of customized education programs and cooperation between industry and VETs are not common.
3) Social partnership

Societies founded on partnership and co-operation can help to realize human potential as well as quality assurance of post-secondary VET. There is a growing awareness about social networking and building trust to support collective endeavors. Social partnerships allows individuals, groups and communities to resolve problems collectively more easily. Schools can foster values for social co-operation as well as providing meeting places where various social networks can intersect. More broadly, institutions of post-secondary vocational education and training, adult learning and professional associations can foster networks crossing different sectors of learning, enterprise and voluntary initiative. To the extent that teaching methods and organization of learning encourage shared learning and teamwork as well as openness to new ideas and cultural diversity, the more schools can help build social capital which bridge across different groups in society.

At the national level, the network of institutional bodies that facilitates skills development includes the Ministerial Committee on HRD, Labor union-Entrepreneur-Government Council, Vocational Education and Training Policy Commission, and Vocational Skills Development. The Vocational Education and Training Policy Commission, which includes the Prime Minister, the relevant ministers, local government officials, as well as, representatives from labor, industry, and public institutions, was originally tasked with establishing and overseeing matters related to vocational education and training policies, such as the formulating a basic plan for vocational education and training, the central policy governing vocational education and training and the certification system, and promoting cooperation between industry-academia to facilitate workplace training. While representatives from labor and management have officially participated in other relevant commissions, committees, and councils, their focus on promoting cooperation rather than actual decision-making and policy setting has meant that these commissions and councils have in reality been unable to properly carry out their roles.

Meanwhile, no system has been established within the labour market to facilitate labor-management participation in the establishment of skills development partnerships. Moreover, at the enterprise level, while the labor-management council has defined the establishment of basic plans to promote educational training and the development of vocational skills as its main objective, this structure has failed to function as originally planned due to the gap between labor unions and employers in their views. Under the Workers’ Vocational Competency Development Act, the MOEL is supposed to provide or finance the costs which employers must pay to establish plans to develop/improve vocational skills of their workers, offer vocational skills development training facilities and programmes, or search for ways to develop and improve the vocational skills of their workers.

In short, existing institutions are not properly working to induce active labor-management participation in the establishment and implementation of vocational training policies, and to induce workers and labor unions to foster in-house vocational skills development programmes.
On the other hand, the Korea Tripartite Commission (KTC) can be regarded as a representative body that promotes social partnerships in post-secondary VET at the national level. The KTC was established at the end of 1997 to overcome the financial crisis, which struck Korea that year. Since its inauguration, KTC has been the most powerful tripartite cooperative body when it comes to making economic and social issues at the national level. In accordance with the Social Pact to Overcome the Economic Crisis reached in 1998, the three sectors of labor, management and the government agreed to, as part of their efforts to improve employment security and ease unemployment, cooperate with one another to increase vocational training programmes. At the time, the government made its intention clear of increasing the number of vocational training programmes for the unemployed; of providing vocational training and financial support to establish vocational training-related facilities once the labor unions and employers agreed to introduce vocational training programmes for the employed and the unemployed; and of increasing the number of vocational training programs for workers without unemployment insurance. Meanwhile, employers pledged to invest more in the development of vocational skills, and the labor unions pledged to actively participate and cooperate in the implementation of vocational education and training programmes.

Although the Korean Confederation of Trade Unions did not participate in the meeting held in July 2001, the third phase of the Tripartite Commission yielded an agreement between labor, management and government on the future direction of vocational training. The commission agreed on the following: first, to promote the participation of labor and management in policy-making decisions concerning the development of job skills and the operation of related systems; second, to improve the effectiveness of the management of the relevant systems; third, to prepare the institutional measures needed to activate voluntary vocational education and training; and fourth, to secure the funding needed to subsidize workers’ voluntary education and training.

Meanwhile, organizations related to vocational education and training are mostly focused on collecting the views of government, labor, and management, which are mostly procedural, during the process of making vocational training policies. However, the lack of a proper understanding and specific knowledge of vocational education and training on the part of labor unions has meant that such bodies have failed to become equal partnerships. There has been a failure to stimulate HRD partnerships at the industrial and individual workplace levels. Indeed, employers unilaterally implemented vocational education and training programmes in accordance with their own needs and without any input from unions and workers.

As such, the HRD for social partnership in Korea can be regarded as still being in its infancy. Given the fact that Korea is only in the initial stages of establishing a tripartite partnership for vocational education and training, it would be difficult to say that a true

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19 There are bodies such as the commission on Employment Policy and the Special Committee on Vocational Skills Development established by the Basic Employment Policy Act, the Vocational Education and Training Policy Commission, and the Vocational Education and training council established by the Vocational Education and Training Promotion Act.
social partnership for HRD has been able to take root. Nevertheless, the future looks bright in forming a tripartite partnership for vocational education and training in the long run.

In the absence of national arrangements to link VET with industry, informal local partnerships between VET institutions and firms have sprung up. While these initiatives are often individually desirable, the absence of a wider framework may lead to a fragmented VET system. A multitude of local arrangements that results in various curricula on practical training, required training hours, and qualifications can make the system more complicated and opaque for students, parents and employers. For example, vocational qualifications obtained in a programme associated with one company may not be accepted by other companies.
The Linkage between VET and Labour Market Needs

Korea’s labor market has changed significantly in a short time after the financial crisis in 1998. The market of young workers is characterized by rapidly rising educational attainment, which in turn has been one of the main drivers of Korea’s strong economic growth. The unemployment rate among the youth population has been on an upward trend relative to the adult population. Also, the rapid quantitative expansion of tertiary education has gone hand in hand with the widening skills mismatch between Korean post-secondary VET and the labour market. To address this mismatch in the labor market, it is crucial to ensure that the education system meets the expectations of both students and their prospective employers in terms of labor market outcomes. This chapter shows that the linkage formed between Korea’s VET and the needs of the labour market based on a combination of several elements such as information, qualification, skills delivery system, and career guidance.

1. Information

1) Signal and Information

Skills (or market) signal can play an essential role in making it possible to create the linkage between education/training and the labor market. Efficient signals facilitate the circulation of skills, as well as the actuation of linkages between the VET and the labor market. The main role of skills signal is to transmit the skills formed by VET to an employer or industry, while the market signal informs education providers or VET programs of the skills needed in the labor market. The better the signals function, the lower the skills mismatch will be in the labor market. If high-quality information on skills is provided by VET programs, employers will be able to reduce the asymmetry of information when offering a job. Thus, the smooth circulation of skills reduces the transaction costs associated with skills development, and helps to meet the needs of the labor market more efficiently. Eventually, good signals upgrade the quality of post-secondary VET. However, if the signal is weak in the labor market, the transaction costs will be high, and thus it will result in a growing skills mismatch (or skills gap and structural unemployment, and so on).

First of all, in Korea, there are two types of information that play a role in signaling the skills needed in relation to education investment and job choice. First is information on job opportunities in the market which has been published by KRIVET with MEST’s support since 2002. These books seek to provide information on the job market for prospective students and adults as well as information on the educational options available in tertiary education to students and parents. This provides information about the fields or programmes of study available in tertiary education and the kinds of jobs or careers available in that respective field including a detailed profile of the jobs. The information on the field of study and career prospects in that field is based on qualitative and quantitative data. However, the quantitative information is
very weak. In particular, there is no detailed information available on wages and on VET programmes, as well as employment data under 3 digit levels according to job classification. Moreover, the information provided does not link the study fields and the jobs available in that field.

The second signal relates to information on higher education according to the Act on Information Disclosure of Education Institution of 2007. Under this act, Korean educational institutions are required to make full public disclosures to ensure the public has the appropriate information to make decisions, to promote academic and policy research, to encourage participation in school education and to improve the efficiency and transparency in educational administration (www.academyinfo.go.kr). The disclosed information includes 100 detailed items grouped under 64 items in 13 areas, where 16 of these items are supposed to function as signals. However, much of the information does not send useful signals. Thus, the information disclosed by educational institutions needs to be trusted by the public and it needs to be aligned to the information used in the assessment or accreditation of institutions and programmes.

To strengthen the linkages, the right signals must be sent and received. So it is very important that qualitative and quantitative information about skills formation and the labor market needs be collected and disseminated. In Korea, there are two types of surveys used to link VET and the labour market including the panel survey and graduate survey.

The Korean Education Employment Panel Survey (KEEP) is conducted by KRIVET. KEEP is a longitudinal research study that extracts representative samples from a population group and tracks them for over ten years. A total of 6,000 samples were selected as the target for this survey, comprised of the following: 2,000 middle school seniors (3rd graders), 2,000 high school seniors (3rd graders), and 2,000 vocational and technical high school seniors (3rd graders). These survey groups were selected in 2004. In addition, households and school administrators (class teachers and school administrators) were also surveyed, with the aim of examining the student’s learning environment and family background, assuming the school environment bears considerable influence on the students’ education. The panel survey is also a public project aimed at developing useful information on the educational experiences of Korean students, their advancement into schools of higher grades, future careers, and transition into the workplace. It is expected to generate a valuable database which would contribute to the formulation of policies and in-depth studies on the current status of education, the impact of education, and the linkages between education and the labor market.

There are various types of surveys for graduates. The first survey is for graduates and is conducted every year. It collects information about the employment status of all the graduates using the Health Insurance DB from 2010. The results of the survey including employment rate are disclosed by the Korea Council for University

20 These items include incoming student recruitment rates, enrollment rates, international student admission procedure and schedule, international students, exchanges with overseas universities, ratio of students to teaching staff, foreign teaching staff, foreign teaching staff by field of education, annual average tuition fees, student scholarships recipients, employment rates, research funding, publication in journals, student accommodation, library budget, and library holdings.
Education (KCUE) according to the Act on Information Disclosure of Education Institution, which is overseen by MEST. The second survey is the Graduate Occupation Mobility Survey (GOMS) that the Korea Employment Information Service (KEIS) conducts under MOEL. GOMS collects information on the performance of 18,000 first year graduates in their job. A follow-up survey is conducted after 2 years. However, these surveys are limited in their ability to dynamically assess the transition of graduates from school to work. The KCUE graduate survey does not capture the fact that graduates are continuously seeking other job opportunities, because the survey is conducted once after the first year of graduation in June 1. The information compiled by GOMS is based on a sample that surveys only 4% of the total number of graduates, and the information is only for 2 years including the first survey and the follow-up survey.

As discussed above, the information system in Korea is weak overall, since the information does not directly relate to post-secondary VET. The information presented has only partial information on post-secondary VET. Also, the information gathered from the surveys is not linked to each other, because the collection, assessment, and dissemination of the information are carried out by separated agencies of MEST and MOEL.

2) Education and Training Information

VET information is based on data related to formal and informal or non-formal education. The main users of this information are households (students and parents), job seekers (graduates, unemployed workers, and employed workers, etc.), employers, and policy makers, all of which are on the demand side. The information directed to students and employers is comprised of education market information related to formal education, while information for unemployed workers or employed workers is comprised of training (or learning) market information collected in non-formal education.

First of all, education market information (EMI) provided by the formal education sector is composed of two types: information for students (or their parents) wanting to enroll in higher education and information for employers wanting to offer a job in the labor market. Students are able to choose between taking an academic or vocational route in advancing their education. Thus, students rely on education market information when making a decision while employers rely on it to identify the abilities of job seekers. The right information allows students to make a rational decision on what type of higher education to pursue, while it narrows the skills mismatch in the labor market for employers.

In Korea, EMI is composed of three kinds of statistical data: education, education administration, and student academic performance. These systems are controlled by the Ministry of Education, Science and Technology (MEST). The data on education are available for

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21 GOMS is Korea’s largest short longitudinal survey. It is conducted yearly and surveys graduates of 2-year and 4-year college programs. It compiles data on graduates two years after the first survey in regards to school education, work experiences, and job training (www.keis.go.kr).
managed by the Korea Education Development Institution (KEDI) and Korea Research Institute for Vocational Education and Training (KRIVET). Information on education administration is collected and disseminated by the Korea Education and Research Information Service (KERIS). Finally, information on the academic performance of students is produced by the Korea Institute for Curriculum and Evaluation (KICE).

- First, the most representative educational statistic is gathered in the “Statistical Yearbook of Education,” published annually. This statistic provides information on school facilities, teachers, students, and departments. KEDI is collecting information about tertiary education graduates with the purpose of assessing the employment conditions of graduates, and KRIVET is conducting education-employment panel surveys. Since these education data has been collected for government administration purposes, the information may be limited in many ways. Also, all of them are quantitative data, thus, it is difficult to generate qualitative information.

- Second, administration information is collected and disseminated by the National Education Information System (NEIS). This information is collected from only under-secondary and secondary schools. Also, the information includes various data on education including admissions, enrollments, student’s health, scholarships, meal programs, athletic facilities, student records, accounts, etc. However, information about tertiary education institutions and programs is not only managed by each institution, but it is not made open to the general public. Thus, in Korea, the information that high school graduates need when enrolling in tertiary education is not effectively available, and hence, are paying high search costs when choosing the department/major or institution for them.

- Finally, information related to academic performance can measure the scholastic aptitude of students. In Korea, there are two ways of evaluating student academic achievement. One is national exams such as the “college scholastic aptitude test” that are designed to measure the students’ scholastic ability for enrollment in university and is set by MEST. The second is to measure the level of the student’s achievement. All of these assess the level of academic education attained at the secondary level. These are different to the objectives of tertiary education institutions which are to prepare students for the real world and to facilitate human capital accumulation. In Korea, student academic performance in tertiary education is hardly measured.

Also, EMI is disseminated online via EDU-net, a web based system for teaching and learning. However, the tertiary education institutions provide information for their own respective programs. Information on the job market is produced and disseminated to students and parents, but information on the programs’ curriculum is not disclosed. The online systems are not qualitatively linked to each other.

Information on informal or non-formal education has an important role in ensuring the quality of post-secondary VET. An adequate flow of information between various actors in the national VET system must be facilitated to ensure quality of education. In Korea, information is provided on government websites or the intranet that links about
16 lifelong education centers and the academic credit bank system and Career-net. In the private sector, individual institutions must be relied on to directly provide information about their programs. Although lifelong learning has rapidly grown in the private sector, basic statistical data that captures information on skills development has not been produced yet. Moreover, information about vocational skills development training is more plentiful than that of lifelong learning. It is mostly provided by the Korea Employment Information Service (KEIS) which is under the Ministry of Employment and Labor (MOEL). Information on all training programs supported by the MOEL is collected and managed online via HRD-Net. Furthermore, the information accumulated is also used for administrative purposes. Surveys on training include focus groups consisting of employers that were not linked to each other but still play a role in informing the public or employers.

We have shown so far that the system for gathering information on VET in Korea is patchy and poorly coordinated. A well working information system can ensure the smooth flow of information based on extensive data which can reveal how the VET system is working. This information is also provided to parties interested in the system’s performance such as – employers, trade unions, the public, government, education, and training bodies. The amount and quality of VET information available in Korea is inadequate.

3) Other Labour Market Information

Labor Market Information (LMI) plays an important role in sending labor market signals informing VETs of the market’s needs. LMI can incentivize workers to acquire skills, which can be truly marketable. The right information means that the value of ‘qualified’ workers and other assets are objectively priced in the wage relative to the qualifications in the labor market. Thus, VET providers are able to meet the demands of the labor market with LMI. Also, an improvement in education and training can lead to an improvement in economic performance. LMI can enforce market discipline among VET providers. In Korea, there are two types of LMI: statistical data and the dissemination system. The statistics are produced by MOEL based on four surveys, which look at wages, working hours, type and amount of expenditures on employment, labor demand conditions, the number of establishments and workers, and so on.

The purpose of the surveys listed in Table 5.1 is to collect employment related information at individual firms. Besides these surveys, various statistics are produced in Korea. However, all the statistics are quantity or price based surveys, which are not completely reflective of Korea’s demographic which samples firms with five or more employees. There are also surveys that sample households or individuals, but these

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22 The education and training process is a “black box”, in which skills are produced. This black box is evident in recent endogenous growth models, in which human capital formation and training externalities play a prominent part in explaining divergence of national growth rate (Lucas, 1988).

23 These surveys are Occupational Employment Statistics (OES) and Graduates Occupational Mobility Survey (GOMS). OES is a nationwide study on the employment status of all residents living in Korea over fifteen years of age. It is the base data for making employment forecasts based on occupation, career path selection and job training by assessing employment structures according to
surveys do not reveal the population’s demographic. In addition, these statistics do not provide information about skills needed in the labor market. KRIVET has recently planned to start pilot surveys for the kind of skills in demand. Also, a survey with national statistics is underway.

Table 5.1 MOEL Survey Data in Korea

<table>
<thead>
<tr>
<th>Survey Name</th>
<th>Purpose</th>
<th>Coverage</th>
<th>Reference month</th>
<th>Survey items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survey on Wage &amp; Working Hours</td>
<td>Survey on wages, working hours, etc., of all employees (permanent, temporary and part-time) in firms with five or more permanent employees by industry.</td>
<td>A sample of 7,208 firms with five or more permanent employees.</td>
<td>Wage counting period for each month</td>
<td>Days and hours worked, total wages, regular wages, overtime wages, special wages, etc.</td>
</tr>
<tr>
<td>Survey on Labor Cost of Businesses</td>
<td>Collect data on the type and amount of employee expenses, and provide data for the establishment of labor policies and promotion of workers' welfare.</td>
<td>A sample of 3,525 firms with 10 or more regular employees.</td>
<td>Every fiscal year</td>
<td>Total cash wages (regular and overtime pay and special pay including bonuses), retirement pay, recruitment expenses, education and training expenses, legal welfare expenses, non-legal welfare expenses, etc.</td>
</tr>
<tr>
<td>Survey on Labor Demand</td>
<td>To survey labor demand conditions by gathering information on the current number of employees, the number of vacancies, the number of employees expected to be hired, the number of job openings and the number of filled job openings. The survey is conducted by industry, occupation and establishment size, and it is used for the effective adjustment of labor demand.</td>
<td>A sample of 32,990 workplaces with five or more permanent employees.</td>
<td>Every April 1 and October 1</td>
<td>Current number of employees, number of job openings, number of filled job openings, number of unfilled job openings, number of vacancies, number of employees to be hired, and reason for unfilled job openings.</td>
</tr>
<tr>
<td>Survey on Labor condition by Type of Employment</td>
<td>To survey the number of establishments by region and the number of workers by gender and employment type by compiling statistics on all establishments with a regular, temporary and part-time or unpaid family worker or more based on the results of the “Census on Basic Characteristics of Establishments” conducted by the National Statistical Office every year.</td>
<td>A sample of 32,284 workplaces with one or more employee.</td>
<td>Period for calculating wages for June</td>
<td>Worker’s employment type, years of consecutive service, years of work experience, job levels, number of working days, number of working hours, monthly payment, yearly special payment, whether or not to take out social insurance, etc.</td>
</tr>
</tbody>
</table>

Source: Ministry of Employment and Labor, (www.moel.go.kr)

For LMI to be relevant to VET programs, it has to be able to process and analyze data that has been collected in advance. Also, processing and analyzing quantitative data as well as qualitative data is important when it comes to linking VET and labor market needs. In addition, it is essential to identify the results of VET investments to

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228 industry subcategories and 426 occupational subcategories.
determine the kind of skills that are and will be in demand. In addition to disseminating LMI, it has to analyze basic statistics and link qualitative and quantitative information.24

Beside these systems, there are many networks for disseminating information. However, most of these systems are scattered among various ministries or institutions. The systems also do not analyze or share information together with each other. Also, there is little standardization among the various systems to facilitate connectivity with each other. Although these networks are collecting and disseminating a great deal of information, they are not providing any information on the kind of skills in demand in the labor market.

4) Forecasting the Demand and Supply of Skills

The information used so far captures data on VETs and the labor market from the past and present. However, knowing the expected conditions that affect the demand of skills is imperative to ensuring sustainable economic growth. After the economic crisis, the skill needs of Korea’s labor market have been rapidly changing. This changing trend will likely accelerate as knowledge and technology is developed further in the future. This rapid shift in the demand of skills is contributing to structural unemployment and skills mismatch in the labor market. Moreover, the structural mismatch will likely widen even more if the current policy direction is not changed in the future. In response to these changes, information on the future development of skills is needed to appropriately educate and train the labor force and to prevent a skills mismatch. New kinds of jobs are expected to be created in the future workplace driven by structural changes in industry or in the labor market. This will require new skills and more advanced knowledge and technology.25 The purpose of forecasting the demand and supply of skills is to produce information on the kinds of skills required for new jobs. Two types of forecasting are considered: one is quantitative forecasting of manpower demand for economic development planning; and the second is qualitative forecasting of the demand and supply of skills.

In Korea, manpower demand forecasting analyzes the structural changes in the population of economically active people. Based on estimates of the economic structure, the projection of job supply and demand is based on various factors including

24 Work-Net is providing companies and job seekers with a wide range of employment information and a variety of employment support services including aptitude tests, sociology tests, online job counseling, online job fairs, and a group consulting program. Employment insurance network provides information to companies and individuals, and provides services related to civil requests and firm banking. It helps employment support centers and public agencies to perform tasks related to employment insurance. Job training network provides information related to job training to companies and jobseekers, allowing web training searches and applications. Foreign worker administrators tasks related to foreign worker visas (www.keis.go.kr).

25 By DEDEOP (2008a), lack of information on future skill needs and new skills emerging has been a long-standing concern in Europe. The recently adopted Council resolution draws attention to the practical steps that need to be taken in education and training to provide citizens with better opportunities to succeed in the labor market. The resolution singles out work done by Cedefop and its network Skillsnet as a major contribution to this process.
Changes in occupational employment, changes in expected wages, and variations in required skill levels. Changes in occupational employment are mainly influenced by the changes in final demand, technological level, changes in business practices, and changes in international transactions. The projection of occupational supply and demand must consider complicated and diverse variables. Various models have been developed based on the institutions and practices of the labor market as well as a country’s stage of economic development [Park, Lee, and Kim (2006)]. The forecasting of labor demand and supply can take two approaches: estimating the number of workers needed and estimating social demand. In Korea, the method of forecasting the number of workers needed has been applied.

Foremost, the working age population is estimated based on population projections by age and region to forecast labor supply. The segment of the population unable to engage in economic activities is automatically omitted from this calculation. The participation rate of economic active people is estimated based on the projection of the working age population. The number of economically active people can be quantified by multiplying the participation rate by the working age population. As a result, the future size and composition of the labor force is based on projections that combine the population size and participation rate of economic active people.

Next, the forecasted labor demand is processed in five stages. In the first stage, labor demand is projected based on forecasted gross domestic product (GDP) and final demand as a total of industrial output under a multi-sectoral macroeconomic model. Hence, total demand is derived based on the unemployment rate being in equilibrium and the projected labor supply. In the second stage, final demand is projected as domestic industry output. In the third stage, industry employment is estimated based on the number of jobs and hours worked, considering changes in technology and industry labor productivity. In the fourth stage, the occupational employment is projected based on an industry-occupation matrix. Finally, the number of employees by occupation is estimated.

Projections of new labor demand are included in Korea’s forecasting model. Most of the new labor includes college graduates looking to enter the labor market for the first time after completing their education and training. An individual that does not engage in economic activity is not included in the calculation of new labor entrants even though the individual belongs to this group. Thus, new labor entrants include individuals that naturally begin to participate in economic activities because they have reached the age to do so or have just graduated. The new labor demand refers to the sum of the growth in demand, which is calculated based on the number of new jobs created due to economic growth and other factors that lead to employment growth including retirement or death of existing workers. The most important driver in the demand for new entrants is the movement of graduates in school, which bring changes in economic activities as graduates choose to pursue a higher degree after graduation, secure employment, or look for jobs.26

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26 CEDEFOP’s forecasting for skill needs be distinguished into four modules: 1) Module 1 is a set of multi-sectoral macroeconomic forecasts, based on the preferred macroeconomic model, 2) Module 2 is an occupational expansion demand model, based on a survey of labor data, 3) Module 3 is a
Beside Korea’s forecasting models discussed above, most of the models use aggregated and quantitative forecasting methods. However, the importance of job or industry specific skills is increasing, driven by advances in knowledge and technological change; consequently, it makes the job of forecasting for a specific job or industry more important. Also, forecasts need to define not only general skills such as communication, literacy, foreign language, problem solving, and so on, but also specific skills required in industries or occupations. However, the definition or the classification of skills is not complete, nor have the forecasting methods incorporated these variables.

2. Qualification

Skills are represented by qualifications which employers use to recognize the sort of skills taught by post-secondary VET providers. It is one of the means available to evaluate and identify an individual’s vocational capability. Qualifications can consist of an academic degree and a vocational qualification. In Korea, there are two types of separate qualifications. An academic qualification is divided between a tertiary degree and lifelong learning degree, while a vocational qualification is mainly based on vocational education and training.

Three types of qualification systems can be considered: academic qualifications, vocational qualifications, and credits accumulated. An academic qualification constitutes vocational and academic degrees earned in tertiary education. Vocational qualification is based on the vocational education and training received in a specific field of work or skill. The credit bank system is related to lifelong learning for adults, where participation in the program can lead to an academic degree.

1) Educational Qualification System

According to the OECD (2004), the issue of quality assurance or accreditation of institutions and programs, and the recognition of academic and professional qualifications are closely related. One of the most important implications is when students or employees move to another country; their qualifications often have to be re-recognized all over again. Also, national quality assurance systems are necessary to monitor not only the quality of tertiary education in the country but also the delivery of tertiary education internationally. Thus, an external quality assurance system is essential for the credibility of a national tertiary education. A student receives a degree qualifications expansion demand module, based on similar data sources, 4) Module 4 is a replacement demand module. On the other hand, the forecasting of skill supply includes three modules: 1) Module 1’ is an augmented/extended version of the existing pan-European macroeconomic model, which incorporates a new demographic and labor-supply module, 2) Module 2 is an analysis of the labor force survey micro data from Eurostat to predict the probabilities of the population and the labor force achieving different levels of qualification, 3) Module 3 is an analysis of aggregate flow data published by Eurostat/OECD to produce a complementary analysis of participation and qualification rates by broad age groups (CECEFOP, 2008a and 2008b).
as a qualification in post-secondary education after having completed at least two years of cumulative theoretical studies, since having started tertiary education. In Korea, there are four types of degree qualifications: associate degree, bachelor degree, master degree, and Ph.D. (Doctorate of Philosophy) degree.

Educational programs for an associate degree are generally practical, technical, occupational, and designed for a specific job and skill, and are categorized as ISCED 5B level (OECD, 1999). The qualification category of ISCED 5B is focused on delivering occupational-specific skills needed to enter the labor market, although some theoretical foundations are considered in the same category. In Korea, an associate degree is conferred by junior colleges and polytechnic colleges, which offer the same programs as post-secondary VETs. Junior colleges provide two to three year programs of cumulative vocational education, while polytechnic schools provide vocational training programs that last two years. However, training programs at polytechnic colleges are more practical and technically oriented than junior colleges.

Educational qualifications include academic degrees such as bachelors, masters, and Ph.D. Bachelors and masters degree programs are theoretical-based and intended to provide sufficient qualifications for gaining acceptance into advanced research programs and professions with high skill requirements. These programs are subdivided into ISCED 5A according to the OECD ISCED. A bachelor’s degree typically requires four years of accumulative studies, while a masters degree requires two years after obtaining a bachelors degree. The Ph.D. program is offered by tertiary schools to award an advanced research qualification. The theoretical duration of these programs are three years full-time for a cumulative total of at least seven years at the tertiary level.

In Korea, education qualifications have tended to be completely academic-oriented according to social preference. Although an associate degree is intended to prepare students for a particular occupation, the curriculum at junior colleges is similar to universities. Thus, the linkage between the degree system and vocational qualification system is very important in the functioning of skills signal. The position of a degree and vocational qualifications are assigned based on a national education system’s internal hierarchy of accreditation, in countries like Australia, Canada, New Zealand, and United Kingdom. However, Korea does not achieve the level of skills to link theoretically-based degrees with vocational qualifications.

Currently, a bachelors and masters degree is required to go from an academic-oriented curriculum into a practical or technical-oriented program. In Korea, tertiary education is required to restructure their system, in order to increase programs for adults and to reduce programs for young students due to Korea’s low birth rate. Korea’s system of quality assurance and recognition are not yet ready to meet the challenges of cross-border higher education. National systems for quality assurance, accreditation and recognition of qualifications often do not cover cross-border and profit-driven providers. This may increase the risk of students receiving education and training from

27 The curriculum of programmes at this level has a strong theoretical foundation, emphasizing the liberal arts and sciences (e.g. philosophy, mathematics, etc.) to prepare students for professions with high skills requirements (e.g. medicine, dentistry, architecture, etc.).
unqualified providers or obtaining degrees that offer a low quality of education and qualification. Professional jobs depend on trust and high-quality qualifications. It is essential for consumers of professional services to have full confidence in the skills and qualifications of the service providers. If the risk of obtaining low quality credentials rises in the long run, it may negatively impact the confidence of consumers in regards to professional qualifications (OECD, 2004, p.16-17). In Korea, the quality assurance system needs to cope with the challenges of the growing access to and diversity of cross-border education and the emergence of profit-driven providers.

2) Vocational Qualification System

The vocational qualification system has been managed by the government for a long time. Korea’s vocational qualification system consists of three parts: National Qualification, National Technical Qualification, and Private Qualification. The vocational qualification system was established by the National Technical Qualification Act in 1973. The National Qualification has separately been managed by each government ministry based on the related law. Although the Basic Act on Qualification in 1997 paved the way for the private sector to develop a private vocational qualification system, the operation of the qualification system is regulated by the related law that government ministries manage and govern (Lee, 2005).

In Korea, there were 512 national technical qualifications and 132 national qualifications in 2011. National technical qualifications facilitate the “ability of recognizing qualification” that identifies and matches the relevant skill and knowledge required for a job. Many national qualifications are considered “job-monopoly qualifications” that verify if workers have the skills or knowledge to execute the related job in the workplace. There are also two types of “job-monopoly qualifications” including: “license qualification” and “obligation employment qualification.” The first qualification requires that only a person with the prerequisite certification be allowed to work in that job, while the second legally requires employers employ a worker with a specific certificate. On the other hand, private qualifications consist of three types: authorized private qualification, registered private qualification, and in-house private qualification. In 2011, there were 84 government-authorized private qualifications, 2,008 registered private qualifications, and 108 in-house private qualifications. In

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28 Through the UNESCO 1st Global Forum on Quality Assurance, Accreditation and Recognition of Qualifications (October 2002), the UNESCO/Norway forum on Globalization on Higher Education (May 2003) and the OECD/Norway Forum on Trade in Educational Services – Managing the internationalization of Post-secondary education (November 2003), there is a large consensus for the following policy objective. 1) Students/learners need to be protected from the risks of misinformation, low-quality provision, rogue providers, bogus institutions, diploma mills and qualifications of limited validity. 2) Qualifications should be readable and transparent in order to increase their international validity and portability and to ease the work of recognition and credential evaluators. This should be facilitated by reliable and user-friendly information sources. 3) Procedures for recognition of qualifications should be more transparent, coherent, fair and reliable and impose as little burden as possible on mobile professionals. 4) National quality assurance and accreditation agencies need to intensify their international co-operation in order to increase their mutual understanding.
Korea, the number of private qualifications has quickly increased from about 600 in 2005 to 1,422 in 2010. This rapid increase of private qualifications is due to the expansion of lifelong learning programmes in the private sector driven by the increase in leisurely and culturally driven consumption as well as expansion of the service industry or social services in the Korean economy.

Table 5.2 Vocational Qualification in Korea

<table>
<thead>
<tr>
<th>Type</th>
<th>Number of Vocational Qualifications</th>
<th>Related Law</th>
<th>Related Administer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2011</td>
<td>2008</td>
<td>2005</td>
</tr>
<tr>
<td>National</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>National</td>
<td>512</td>
<td>586</td>
<td>575</td>
</tr>
<tr>
<td>Other National</td>
<td>132</td>
<td>128</td>
<td>118</td>
</tr>
<tr>
<td>Authorized</td>
<td>84</td>
<td>77</td>
<td>62</td>
</tr>
<tr>
<td>Private Registered</td>
<td>2,008</td>
<td>829</td>
<td>500</td>
</tr>
<tr>
<td>In-house</td>
<td>108</td>
<td>77</td>
<td>49</td>
</tr>
</tbody>
</table>


The government’s National Technical Qualification was instituted so the mechanisms for signaling in the labor market could transmit the skill signals needed to achieve sustainable economic growth. The circulation of this qualification in the labor market is influenced by the principle of matching between post-secondary VET and the labor market. If employers are not assured of its creditability by the government, then the value of qualification disappears in the labor market. The Ministry of Employment and Labor (MOEL) operates the National Technical Qualifications, which is administered by 17 government ministries. According to the National Technical Qualification Act, MOEL commissions 7 agencies to conduct qualification examinations. The agencies’ tasks include formulating questions, administering exams, managing registration, and providing complementary education. However, the Technical Qualification System Deliberation Committee is in charge of decision-making matters like creating and cancelling qualifications, and amending the examination system. The committee is composed of public officials from 20 ministries and experts recommended by the minister of MOEL.

Also, the National Qualification System is governed by 17 ministries and committees. National qualifications are similar to obtaining a license. The National

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29 The seven agencies are Human Resource Development Service of Korea (HRD Korea), Korea Chamber of Commerce and Industry (KCCI), Korea Institute of Nuclear Safety (KINS), Korean Film Council (KOFIC), Korea Creative Content Agency (KCCA), Korea Communication Agency (KCA), Korea Mine Reclamation Corporation (MIRECO). Until 2009, HRD Korea and KCCI had taken exclusive responsibility for issuing the certificate of national technical qualification. Then, MOES increased the number of agencies to better meet the needs of industry. Also, HRD Korea is the public institution that is controlled by MOEL. The KCCI is a private organization.
Qualification can provide monopoly power to qualified workers since it is legally binding. By law, employers are required to only employ workers with the prerequisite qualification for a particular job. The monopoly power afforded by qualifications for professions such as doctors, pharmacists, and lawyers, are strong, but for jobs such as car drivers, forestry civil engineers, and insurance administrators, it is relatively weak.

Private qualifications have been managed by the private sector without specific statutes until the Basic Act on Qualifications in 1997. After that, the Korean government has regulated the qualification system in the private sector. The authorization and registration of private qualifications are managed by KRIVET (Korea Research Institute for Vocational Education and training). In-house qualifications are assessed and acknowledged by employers or employer groups, according to specified procedures, as a way of developing and improving the skills of workers. The issue of private qualification is getting larger driven by the growth of private lifelong learning institutions. The private qualifications can be acquired through job-related lifelong learning.

All of the vocational qualification systems discussed above is based on two examinations, a written test and a technical test. A certificate of qualification can be obtained after the requirements to take the test are completed and the candidate passes the test. In the case of the National Technical Qualification, there are four types of qualifications including technical expert, engineer, industrial technician, and craftsman. While the certificate of qualification for the craftsman is open to anyone, the other certificates of qualification – such as expert, engineer, and technician – require applicants to have work experience and academic credits to take the test. Students and graduates of junior colleges and polytechnic colleges are able to apply for the industrial technician certification test. However, the engineer certification test can be taken only after having two years of work experience at the same occupation. The technical expert certification test requires nine years of work experience at the same occupation after acquiring the engineer qualification.

3) Vocational Qualification in Post-secondary VET

Vocational qualification in post-secondary VET is important to the National Technical Qualifications, since the objective of junior colleges and polytechnic colleges is to foster technicians needed by industry. The rate of vocational qualification among junior college graduates was 35.3% in 2010. By field of study, natural sciences ranked highest with 56.8%, while engineering ranked the lowest with 25.3%. On the contrary, 43.5% of polytechnic college graduates that took technician training courses acquired vocational qualification, while 89.6% of the graduates that studied courses on craftsman acquired vocational qualification.

All of the post-secondary VET graduates in junior college are acquiring an associate degree after completing their program. But, all of them did not acquire a vocational qualification until they completed their course. Even graduates of technician courses in polytechnic colleges did not all acquire a vocational qualification, though they acquired an associate degree. Many graduates of post-secondary VET enter into the labour market without a vocational qualification. This means that vocational qualifications
and degrees are not only separated from each other, but also many students in post-secondary VET don’t have an incentive to get a certificate of qualification. As such, vocational qualifications do not play a role in signaling skills to the labour market.

Table 5.3 Vocational Qualifications among Post-secondary VET Graduates (2010)

<table>
<thead>
<tr>
<th></th>
<th>Acquisition (A)</th>
<th>Graduate (B)</th>
<th>A/B</th>
<th>Employment rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Junior college</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engineering</td>
<td>10,109</td>
<td>39,964</td>
<td>25.3</td>
<td>60.1</td>
</tr>
<tr>
<td>Humilities &amp; Social Science</td>
<td>25,352</td>
<td>76,221</td>
<td>33.3</td>
<td>56.9</td>
</tr>
<tr>
<td>Natural Science</td>
<td>20,831</td>
<td>36,644</td>
<td>56.8</td>
<td>60.8</td>
</tr>
<tr>
<td>Arts</td>
<td>8,967</td>
<td>31,807</td>
<td>28.2</td>
<td>34.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>65,259</td>
<td>184,636</td>
<td>35.3</td>
<td>54.6</td>
</tr>
<tr>
<td><strong>Polytechnic</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technician</td>
<td>6,207</td>
<td>2,697</td>
<td>43.5</td>
<td>85.6</td>
</tr>
<tr>
<td>Craftsman</td>
<td>5,428</td>
<td>4,864</td>
<td>35.3</td>
<td>84.8</td>
</tr>
</tbody>
</table>

Source: junior college education indicator, and Polytechnic colleges, internal document

The system of vocational qualifications in Korea is very inadequate when it comes to linking post-secondary VET and the labour market. As a result, there is a wide gap between what is taught in junior colleges and the kinds of skills industry needs. To cope with this skills mismatch, the Korean government is now driving the introduction of a new vocational qualification system, the Qualifications for Accredited Courses (QAC). Under QAC, educational curriculums in post-secondary VET institutions would be based on national competency standards (NCS). Also, students would be given a certificate of qualification after completing the accredited course. The Korean government is first preparing the practical use of QAC as a national technical qualification system, before it plans to expand the use QAC system to cover private qualifications according to the five-year implementation plan. Though the project is underway, it is difficult to say now if the QAC system will be fully implemented in Korea or not.

4) Recognition System

According to the OECD (2004), recognition is classified as an academic and professional qualification. The recognition of academic qualifications is what allows students to decide if to pursue or continue a course of study or confer the right to use a title or degree, while the recognition of professional qualifications is the validation of credentials to practice a profession related to formal and informal education, work experience and expertise. The recognition system reflects both the national system of education and the professions and industries themselves. In Korea, the recognition system includes both types.
In Korea, the Academic Credit Bank System (ACBS) acts as the lifelong learning recognition system. The academic degrees from the ACBS are being linked to promote qualifications in lifelong learning, individual national qualifications, government authorized private qualifications, and private accredited qualifications. Under the ADBS, academic credit is accredited based on the following criteria: the completion of a subject in a related institution (university, junior college, vocational training institution, and education institution), the obtainment of a national qualification, and passing grade on examinations by self-taught students. The participants of lifelong learning are able to acquire an academic bachelor’s degree or diploma once sufficient credits have been accumulated.

Recently, the number of degrees conferred under ACBS has quickly increased driven by the expansion of lifelong learning. The number of academic bachelor’s degrees has grown to be more than the number of vocational degrees, and is rapidly increasing in Korea. Indeed, the number of the academic degrees has decreased from 31,442 in 2009 to 26,051 in 2010, while the number of the vocational degrees has decreased from 4,657 in 2006 to 2,192 in 2010. This increase means that the demand for job-related lifelong learning is quickly growing in Korea.

![Figure 5.1 Number of Degrees Acquired under ACBS](Source: Ministry of Education, Science and Technology, Internal Document.)

However, Korea’s ACBS is focused on only fulfilling the demand for academic degrees, and it does not cover vocational qualifications. As such, it has a weak link to post-secondary VET programmes.
3. Skills Delivery System

The market signal transmits the skill needs and performance of human capital investments in the labour market. The skill requirements of the labor market are influenced by advances in knowledge and changes in technology directly. It is also impacted by changes in the way society recognizes leisure and culture in the long term. This means that the signal in the labor market is the difference between job-oriented skills and non-job-oriented skills (such as knowledge on leisurely or cultural activities).

Recently, the demand for non-job-related skills in lifelong learning has increased in Korea as people have become more interested in community development and social cohesion. Also, the kinds of job-related skills needed have become more diverse driven by a more flexible labor market as the economy becomes increasingly knowledge-based and the population ages. The way the market signal functions in post-secondary VET has become more complex than in the past. Thus, it is important to analyze and disseminate information related to the skill needs of the labor market. In Korea, professors or instructors have mainly played the role of transmitting the needs of the labor market; however, the Sector Human Resource Development Council (SHRDC) and the National Competency Standards (NCS) has been set up to send market signals.

1) Function and Structure of SHRDC

The collection and dissemination of information on skill needs of the labor market can be carried out though organizations that act as sector councils. In Korea, the Sector Human Resource Development Council (SHRDC) collects and disseminates information on the skill needs of employers. Also, it is important to deliver labor market signals to providers based on standardized skills. Thus, the market signal is based on information collected by SHRDC from each industry. Then, the signal is delivered by SHRDC to post-secondary VET providers.

In Korea, the government had led the formation of skills to promote industry development after the 1960s, but the supply-oriented HRD (human resource development) system has not been able to adequately reflect the needs of industry recently. To overcome this skills mismatch, the Korean government introduced the SHRDC system in 2003. The purpose of SHRDC is to build a new skill delivery system that changes the existing supply-oriented system into a demand-oriented system.

Generally, the type of skill that is present in the labor market has been divided into two: general skills and firm specific skills. While human capital investment for firm specific skills is developed within a firm, only general skills are formed through vocational education and training. As an economy advances toward a knowledge-based economy, the level of skills required by individual firms is impacted by rapid changes in industrial technology. Therefore, it is very important to identify industry specific skills that lie between general skills and firm specific skills. Industry specific skills can be undersupplied in the labor market because firms may not have incentive to invest in the education and training of workers. On the other hand, if firms are relied on to supply industry specific skills, then market failure occurs in the skills market. This market failure takes place because firms do not have monopoly power over their
workers as trained employees could move to another firm. The SHRCD plays an important role in capturing the information in relation to industry specific skills.

The function of SHRDC can be described in the following: the analysis of demand for industrial manpower, the development of education and training programs for industry specific skills, the development of standardized skills by industry, and the operation of school-industry collaborative projects. These functions are all related to information on the labor market as well as the linkage between the providers and users of skill.

The development of a VET program for a particular industry is based on industry specific skills. This means that SHRDC is able to develop vocational education and training programs for skill formation that are in demand. Additionally, this will allow it to facilitate school-industry collaborations. The VET providers and SHRDC are able to conduct joint projects to develop programs as well as to connect with the employers of graduates. Through the development of the program by SHRDC, the skill needs in the labor market is directly fed to post-secondary VETs as well as linked to the qualification system and to the skill standardization system.

A set of national competency standards need to be established by SHRDC because they can stay attuned to industry needs. If the standards do not match the needs of industry, then the value of the standards is lost and weakens the market signal function of SHRDC. SHRDC can reflect the skill needs of industry in the national competency standards based on information they collect and analyze. The SHRDC is able to create the market signal through the NCS based on industry needs.

In Korea, SHRDC was initially established with three parts in 2004. After that, the number of organizations has grown to 23 in 2010 under the government. SHRDCs are based on the Industry Technology Act. By this Act, the SHRDCs are overseen by the Ministry of Knowledge Economy (MOKE) with cooperation from the related ministries (MOEL and MEST).

<table>
<thead>
<tr>
<th>Year</th>
<th>The SHRC by Industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>Machine, Electricity, e-Business</td>
</tr>
<tr>
<td>2005</td>
<td>Shipbuilding, Steel, Semiconductor, Display, Automobile, Petro-chemistry</td>
</tr>
<tr>
<td>2008</td>
<td>Info-communication, Physical-distribution, E-learning, Electric-work, Biotechnology, Robotics, Nano-technology</td>
</tr>
<tr>
<td>2009</td>
<td>Green-finance, Soft-ware, Medical-appliance, New-energy, Global health care, USN (Ubiquitous Sensor Network)</td>
</tr>
</tbody>
</table>

Source: KIAT (Korea Institute for Advancement of Technology), www.shrdc.co.kr.

The government provided funds of 13,410 million Won for SHRDCs in 2010. The MOKE provided funds of 1,330 million Won for the operation of SHRDCs. The MOEL provided funds of 11,270 million Won for education and training programs. Finally, MOEST provided funds of 810 million Won to SHRDCs for school-industry collaborative works.

As Table 5.4 showed, SHRDCs by industry are concentrated in the fields of natural
Science and engineering. Thus, the SHRDCs are only able to send a partial market signal of the industry’s needs. Since the SHRDCs cover only specific industries, it has difficulty in coping with the skill mismatches in the labor market on a wider scale. Korea’s SHRDC rarely considers the increased demand for lifelong learning.

### Table 5.5 Amount of Support to SHRDCs by Year

<table>
<thead>
<tr>
<th>Ministries</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOKE</td>
<td>50</td>
<td>70</td>
<td>130</td>
<td>200</td>
<td>150</td>
<td>150</td>
<td>133</td>
<td>133</td>
</tr>
<tr>
<td>MOEL</td>
<td>-</td>
<td>-</td>
<td>200</td>
<td>200</td>
<td>350</td>
<td>780</td>
<td>1,127</td>
<td>112.7</td>
</tr>
<tr>
<td>MEST</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>81</td>
</tr>
</tbody>
</table>


As seen in Table 5.5, government support is inadequate to achieve the aim of SHRDC. Specifically, the collection and analysis of information used to send market signals such as forecasted labor demand, the type or level of skill required in the labor market, and the performance of human capital investments, is very important to strengthening the market signal function of SHRDC. However, this is rarely accomplished today in SHRDCs.

The existing governance system does not allow SHRDCs to function as intended for two reasons. First, the lack of an overarching committee that brings together all of the government ministries. SHRDCs are supposed to be based on the cooperation of many organizations including the industry (MOKE), vocational education institutions (MEST), and vocational training institutions (MOEL); however, SHRDCs are essentially managed by organizations within an industry. Second, SHRDCs are managed by traditional industry associations, whose main objective is to drive profits for their industry. So the associations do not consider the importance of skill needs and the information of the labor market most of the time.

#### 2) National Competency Standard (NCS)

The standardization of skills is a key part of the market signal which reflects the needs of the labor market to the VET programs and qualification system. In addition, it plays an important function in delivering skills, reflecting labor market needs for VET providers as well as qualification. Standards enhance the linkage between the supply and demand of skills. Also, standards provide a criterion that can be used by employers when making personnel decisions. Although a standard of skills has been developed by government agencies in Korea to cope with the inability of the qualification system to accommodate industry demands, it still is not utilized by VET institutions. Therefore, the Korean government has established the NCS with an integrated standard that meets the needs of industry to create a demand-oriented delivery system that would replace the supply-oriented system.\(^\text{30}\)

\(^{30}\) During this time, MEST has been developing the Korean Skill Standard (KSS) according to the
The NCS would ensure that the type and level of skills is based on the needs of the labor market. In Korea, the NCS has been designed as an intuitional platform in which education and training, job placement, and qualification, reinforce one another and reflect the skills and competencies required in the market. The government, research institutes, and training institutions, are part of the framework and deliberate on these issues. This allows them to make decisions and reconcile their own interests. This concept of governance would help to better capture the dynamics of jobs, the labor market, and qualification systems. It covers the following critical issues: what competencies are needed, how to better select training providers so as to deliver the right mix of skills, and how to share training costs among the stakeholders (Ryu, 2010). Also, the NCS is linked to post-secondary VET programs or their curriculum.

The objective of the new NCS in Korea is to strengthen the market signals so that VET programs can match the skill needs of the labor market. Standardized information on job competency can be fed into the qualification system, which would help meet the skills demanded in an environment of rapid technological change and globalization with the establishment of national standards. In addition, analyzing the skills in demand at the workplace based on a job or sector is a high priority. This would require reforming the education system, strengthening the link between skills and education curriculum, implementing a structural reform of junior colleges and universities to achieve a balance between higher education and vocational education programs. The reforms would also entail expediting the integration of related disciplines and establishing converging science disciplines (Ryu, 2010). The NCS is expected to strengthen the linkage between VETs and qualification as well as job-oriented lifelong learning.

Until now, the Korean government agencies (KRIVET and Human Resource Development Service of Korea) have developed about 260 NCSs, 35 of which have been accredited by the Council for Vocational Qualification Policy based on the Qualification Act. Also two NCSs have been used as models in two junior colleges and one vocational high school. The Korean government plans to expand the practical use of NCS in the curriculums of VET institutions such as junior colleges, polytechnic colleges, vocational high schools, and training institutions. Moreover, the Korean government set up a five-year implementation plan, which would go until 2016, for a national qualification system that contains the development of 400 NCSs. Also, the practical use of NCS is expected to expand under the five-year plan, covering 50 curriculums at junior colleges and vocational high schools as well as 319 curriculums at polytechnic college and job training institutions until 2016. Also, a new qualification system is expected to be introduced which will allow students to receive certification without taking another test for students that complete the curriculum established under Basis Act on Qualification, while MOEL has also been developing the Korean Occupational Standard (NOS) according to the National Technical Qualification Act. These standards are intended to systemize skills, by industry and level, that is required in a job. Also, since industry experts take part in the process of standardizing skills, they are able to reflect the skill needs of industry as well as to ensure they are reflected by the qualification system through a program’s curriculum. However, both of these measures have not been completely reflected in the qualification system and curriculum. MEST and MOEL merged the KSS and NOS with NCS on December, 2010.
the NCS. However, the development and practical use of NCS is still underway, without a detailed implementation strategy. In reality, it requires the participation of many stakeholders, such as industry, research institutes, VET institutions, and the government. According to the Qualification Act, SHRDCs can contribute to the development of the NCS. The participation of SHRDC in developing the NCS would lay the basis to make the change from a supply-oriented or input-oriented framework to a demand and result-oriented framework. However, SHRDC has not yet been given the task of developing the NCS; instead it has been led by the government (MOEL) only. Although the standardization of skills has been discussed for a long time in Korea, it has yet to take full effect.

4. Career Guidance

Students as well workers have to continuously develop their skills to cope with rapid advances in knowledge and technology in the workplace. Since labour market needs for skills are very complex and diverse, individuals need information on post-secondary VET programmes as well as future job prospects. As a result, the goals of career education are not limited to just selecting careers at specific stages of life. All people in the knowledge-based society require the development of their competencies based on career goals, and the ability to adjust to the work environment. Social problems such as the rise of youth unemployment and excessive expenditure on private education have turned more attention to the importance of career guidance. Eventually, it is expected that the main role of career guidance will be to reduce the gap between VETs and labor market needs as well as to facilitate regional career development of young people and adults.

1) Challenges in Career development

Career guidance plays a role in both sides of the supply and demand of skill circulation. On the supply side, career guidance helps students (or adults) and providers find the right program within the post-secondary VET system. On the demand side, career guidance can inform individuals what skills are needed in the workplace or what to expect in the working world. As such, the decision of investing in human capital can take into account both supply and demand conditions through career guidance. If this is the case, then who should provide career guidance services? It is determined by the characteristics of individuals demanding it. Generally, career guidance services require information on the working environment and VET programmes as well as a capacity to provide counseling and advice with such information. Since the information and function of counseling has the characteristics of being a public good, market failure can occur in cases where the provider of career guidance services is in the private sector. If career guidance services are inadequate, then the skills mismatch in the labor market can widen. Therefore, public career guidance services are important to individuals that
demand it such as students and job seekers who are unemployed or in search of other work. Also, individuals can demand lifelong learning to earn a higher income with enough vocational capacity and/or desire to pursue more leisurely and cultural activities. In this case, the private sector is more efficient than the public sector because workers are willing to pay for the career services supplied in the private sector.

In Korea, jobs and careers are continuously changing while job security continues to diminish as society ages faster. This change means that individuals have to make complex and difficult decisions. This means that the delivery of career guidance services faces new challenges. To tackle these challenges, career guidance services need to be considered as a high level profession, staffed by professionals with personal experience with labor market issues as well as a background in psychology and career counseling. Career counseling also needs to be based on proactive one-on-one delivery of advice and counseling on important career decisions. Career counselors must be independent to maintain objectivity, and be able to deal with a wide range of information and web-based material (OECD, 2010a). Strong links between post-secondary VET institutions and employers are a very important means of introducing young students to the working world. In Korea, the career guidance service system is still falling short of meeting these expectations.

In Korea, the formal delivery of career guidance lacks reliability and impartiality, as many of the students or adults still rely on informal sources, such as family and friends. This inadequacy in career guidance tends to reinforce existing social disadvantages since parents may lack the capacity and objectivity to advise their children on the full range of career options available to them. As such, many students face potentially high costs when moving to another occupation or education field later on. Also, psychological counseling and career guidance services are not combined as one, and career guidance in Korea tends to focus on immediate educational choices rather than longer term career planning.

Moreover, the system of delivering career guidance services is highly fragmented, delivered by multiple agencies to the same target groups. MEST is in charge of career guidance in schools, while MOEL is in charge of public employment services for adults. At the local level, provincial educational offices are responsible for career education in schools, and regional labor offices are responsible for managing public employment services. In addition, the career development of women is supported by the Ministry of Gender Equality and Family (MGEF). Also, there are laws that partially describe the importance of career guidance and the responsibilities of providing career services. However, there is no law that provides guidance in an innovative way. Lastly, there is a lack of a coordinating body that links the respective ministries.

2) Career Guidance for Students

Career guidance for students is provided in formal educational institutions. Career

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31 In Korea, students wanting to enroll into top universities tend to be driven by parents who influence the career choices of high school graduates. Students with highly educated parents tend to be advised with good information on enrolling in university regardless of learning ability.
guidance for students can be divided between upper secondary and post-secondary. Career guidance in high school is generally related to decisions on entering upper secondary school and getting a job. Although the choice students in upper secondary must make is deciding on which tertiary education institution to apply to, it is also related to the kind of job or career that they want to pursue after graduating from post-secondary VET or universities.

Career counselors in upper secondary schools are mainly suited to supporting students with personal problems or students that want to apply to universities. Counselors with a psychology background can give advice on job search, career prospects, and learning opportunities, but it is very weak. One way of ensuring that vocational programs and labor markets are linked is to give potential VET student useful and value-added guidance, which take into educational and career considerations. Both elements are based on information related to courses, occupations and career paths. Such information is increasingly being delivered on web-based platforms. Both support career services in VET institutions by providing information directly to students.

For career guidance in schools, the first way to encourage completion of studies is to improve the kinds of information available to students at the upper secondary level. Therefore, the decision of students on where to enroll and what to study should reflect their needs, expectations, and abilities. Asymmetric information between students and post-secondary VET institutions often lead students to take the wrong career paths, which results in large costs due to a lack of motivation and self-confidence, lost time, and inefficient financial investments. This risk is particularly high for students from a low socio-economic background who cannot rely upon career guidance services. Information on the kinds of post-secondary VET opportunities available is not sufficient. Here, prospective students also need information on the requirements, demands and labor market outcomes of various programmes to make the right decisions, thus, limiting the probability of choosing the wrong path (OECD, 2008). In Korea, career guidance services at the upper secondary level are outside the sphere of post-secondary VET (or tertiary education) policy, while career guidance services in post-secondary VET are fragmented among various institutions.

In regards to post-secondary VET in Korea, career guidance is provided in counseling centers and employment information centers at junior colleges. Employment information centers have very few experienced staff. As a result, most of

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32 OECD (2010a) suggested two main elements of career guidance: Career education in which students learn about the world of work and develop career management skills through classroom teaching, and through other activities such as work experience; Individual career advice on a one-to-one basis, providing specific advice on career decisions; either pro-actively (mandatory interviews for all) or reactively (on demand).

33 In many OECD countries, regular teachers often provide career guidance. However, since full-time teachers must attend to their main job of teaching which tend to dominate priorities, they can easily neglect the function of career guidance. Also, the teachers do not have enough capacity and expertise to deliver such a complex integrated service (OECD, 2010). In the case of Korea, for 11th grade students, ‘occupation and career’ has been provided as an elective subject for two hours per week for one semester since 2002. However, due to administrative chores and teaching commitments, teachers are not confident of providing career guidance (Lim and Jin, 2005).
the people working in employment information centers lack the necessary skills to provide quality career guidance. The capacity of student counseling centers is also very weak. These centers tend to focus on personal and psychological problems, and the staffs do not have adequate training in career counseling. Most of the career guidance centers in junior colleges rely on private sources of information such as faculty, friends, and family. Employment security centers have gradually expanded their services to include tertiary students as a policy goal to reduce youth unemployment. Students, however, seldom use employment security centers, as they offer little information on job opportunities and often do not have enough competencies to support college students (Lim and Jin, 2005).

But, post-secondary VET institutions often lack the capacity and expertise to deliver such a complex set of integrated services. The career guidance services of post-secondary VET are not able to provide an objective view on all the career options available or even make an assessment of their program’s track record in placing graduates in the job market. Furthermore, the incentive for these institutions is to usually attract as many students as possible to their programs even though it may not be in the students’ best interest (OECD, 2010a). In Korea, many junior colleges do not have the organizational capacity to offer employment services. A career counselor should be largely dedicated to tasks related to employment of students such as career planning, counseling, advice, employment mediation, and lectures for getting a job. Most of the career counseling at junior college has been offered by faculty members or instructors within the department of study. Most employment information centers at junior colleges are not interested in the quality of jobs but of achieving high job placement rates. To address this, the government has been making objective forecasts on job placement. Recently, MOEL has launched a plan to implement the ACE (Academy for Employment) project to promote and develop career services for human resource development, career design, and job placement. However, it is still not attractive for students to use this information effectively.

3) Career Guidance for Adults

The demand and importance of career guidance for adults has been gradually increasing due to Korea’s rapidly aging population and rising number of tertiary educated graduates. Integrating professional career and psychological counseling helps adults adapt to the fast changing world of work. Career guidance for adults entails various elements, such as good knowledge of labor markets, career and learning opportunities, and the capacity to identify and use further relevant sources of information to provide more specific career advice to individuals. Thus, a qualification system would support career counselors in advising professionals in tertiary education but also adults looking to further their career. This would facilitate the recognition and transferability of career counseling skills across these institutions (OECD, 2010b). Career guidance has a very important role to play for adults not only in advising individuals about specific choices, but also in helping to develop the capacity to manage one’s own career.

Career development services for adults are available in employment security centers,
community-based service centers, and private companies. In Korea, there were 81 employment security centers in 2010. Employment security centers provide vocational counseling, conduct psychological tests, and run group sessions. However, most of the counselors devote the majority of their time on administering unemployment insurance and other administrative chores. As a result, it is difficult for counselors to provide individualized attention by considering the various needs of individual job seekers. Moreover, the counselors do not have the kind of job information that users expect. In 2005, MOEL announced a plan to establish a program that could create a virtuous ‘back-to-work’ circle by offering integrated services such as unemployment benefits, vocational training, information, in-depth consulting, and job placement. For such a program to be successful, it is essential to increase the number of counselors and improve their capacity (Lim and Jin, 2005).

In Korea, many of the job placement services are provided by the private sector. However, these services are poor, and the jobs offered are mostly for part-time workers, less-qualified healthcare workers, and visiting housekeepers. Most of the private companies are too inadequate to provide adult career guidance services, and only a few large-scale companies provide these kinds of services for the employed. In most cases, career development is left to individuals themselves without any support from their company even if it is their responsible to do so.

For career development or career counseling of adults, information on jobs is very important. The information should connect VETs and the labor market, as well as collect qualitative data. Within the Korean public employment services, the Know Network for Occupation and Worker (KNOW) is collecting and disseminating information on jobs including career interests, skills, knowledge, salaries, and prospects. Public employment services provide much information on jobs, the labor market, and training. On the other hand, MOEST has carried out the YES (youth employment service) programme to ease the high unemployment rate among the youth since 2009. However, participation in the YES program remains low while the linkage between this information and career counseling remains very weak.

In Korea, career development is administered under the MEST and MOEL. As such, career development services for students and adults are discussed separately. This is also true for career development of the senior working population while services for employed people are not fully considered by these institutions. Thus, MEST and MOEL need to work much more closely with each other and with governments at the local level including provincial education offices, employment security centers, and colleges and universities. This should lead to much more direct collaboration via the exchange of information and services. The objective would be to establish national

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34 This programme began originally 1999 when an internship programme was established with government support. It was changed in 2002 and became a programme for providing youth job experience. It was then renamed to YES (youth employment service) in 2009. The objective of this programme is to help the youth population in planning their careers and making career choices. It is provided in three stages including career counseling, job training, and job placement. The first stage provides individual career counseling and assistance to candidates to find a job. The second stage provides job training and education. The final stage places the candidate in a job based on the results of the first and second stage.
guidelines for career development for everyone, from students to the elderly. Career guidance and counseling have to be based on labor market information. Also, qualitative and quantitative information creates the basis for good career guidance as well as a linkage between education and the labor market, reflecting local characteristics. To produce such information, a systematic mechanism needs be established not only at a national level, but also at a local level.
VI. Challenges and policy

Post-secondary VET can play an important role in strengthening a country’s industrial competitiveness and social security. Its impact can be felt whether the industrial production mode changes into a high value-added structure or not. Moreover, human resource development through post-secondary VET can contribute to promoting regional balanced development. To overcome the challenges in post-secondary VET, we should consider not only the post-secondary environment, but also the economic and social conditions. This chapter assesses the economic and social conditions and the present status of post-secondary VET in Korea, and suggests possible policy recommendations.

1. Economic and Social Changes

In Korea, post-secondary VET faces major challenges in both the supply and demand of skills. These challenges stem from changes in the economic and social environment. Moreover, Korea’s economic and social environment has undergone more and more changes in a short time. As a result, the skills mismatch in the labour market continues to widen even more. In particular, the skills mismatch in the labour market has negatively impacted economic growth as well as social stability. Also, Korea’s current socio-economic conditions are linked to the skills mismatch, the causes of which are highly complex and multi-faceted. In such cases, post-secondary VET can play an important role in promoting economic and social development, by narrowing the skills mismatch or skills gap in the labour market. Thus, the challenges in post-secondary VET caused by changes in the economic and social environment can be viewed in three ways.

First, while the mode of industrial production has rapidly changed on the back of economic development, the modes of skills formation have also slowly changed. The past modes of production geared towards “catching up” required uniformed skills. However, the transition to a knowledge-based economy is requiring a more diversified or high-quality set of skills. In particular, the structural problem of lower economic growth has recently led to greater disparity within Korean industry. SMEs still face a wide skills gap in the labour market as well as have difficulty in finding qualified workers. Thus, the Korean labour market needs to transform from being one that is based on low-level skills to one that is based on high-level or creative skills. In this regard, the Korean post-secondary VET has hit its limit in being able to supply highly skilled workers or creative workers.

Second, Korea’s school age population has rapidly declined. Moreover, many tertiary education graduates experience difficulty in getting a job in the labour market. At the same time, the enrollment rate of high school graduates entering tertiary education has rapidly increased from 68.0% in 2000 to 79.0% in 2010. A highly educated population can be a source of economic growth driven by productivity growth.
But, more entry level jobs have to be continuously generated to absorb the highly educated population. However, high youth unemployment and wide-spread skills gap or mismatch in the labor market remain structural problems in the Korean economy. Indeed, there has been an over-investment in regular education, and an under-investment in lifelong learning. Meanwhile, post-secondary VET has also simultaneously increased. Also, workplace training in post-secondary VET remains very weak in Korea. As a result, students experience difficulty making the transition from school to work while the skills mismatch in the labour market continues to widen.

Third, the skills mismatch in the labour market stems to a large part from Korea’s low birth rate and the fast aging population. Amid rapid economic growth, the fertility rate has declined even faster. The number of school age population has quickly fallen due to the low birth rate. As such, this has led to an oversupply of educational services. As a result, tertiary education institutions are faced with the difficult situation of having to restructure. Also, Korea’s population continues to age rapidly; in that the baby boomer generation, who were born in the late 1950s and early 1960s, is growing older and nearing the age of retirement. Moreover, many elderly people want to continuing working even after having retired from their previous job, as their retirement benefits do not provide enough financial security. This increases competition for jobs between the elderly people and young people. As such, it is imperative to reform Korea’s tertiary education as well as post-secondary VET.

Korea’s economic and social environment has significantly changed the kinds of skills demanded in the labour market. This means that post-secondary VET can play an important role in enhancing economic growth and social security.

2. Findings from Study on Post-secondary VET

The challenges and issues in Korea’s post-secondary VET are discussed in chapter’s II, III, and IV. Korea’s junior colleges and polytechnic colleges, which contribute to the formation of skills, are part of Korea’s post-secondary VET. As discussed in the preceding chapters, these institutions are facing difficulty financially, and in recruiting students due to dramatic changes in Korea’s economic and social environment. Moreover, these institutions are confronted with the challenge of improving post-secondary VET and overcoming the skills mismatch or skills gap in the labour market.

1) Challenges and Issues in Post-secondary VET

Post-secondary institutions lie within tertiary education, and are being impacted by changes in the economic and social environment as discussed previously. Tertiary education tends to exhibit “academic drift,” in that vocationally oriented institutions increasingly want to emulate the elite universities. Most of the institutions are private schools. Indeed, nearly 93.2% of the junior colleges and 85.4% of the universities are private schools. The private sources (students and parents) of paying for education costs account for a high share of total funding sources at 79.3%. Specifically, tertiary education institutions are faced with a crisis of declining enrollments due to the low
Challenges and policy

Birth rate. This will require the institutions to undertake restructuring and to institute a new governance structure and funding system to improve the quality of education. The challenges and issues in post-secondary VET can be summed up in the following:

- In Korea, most tertiary education institutions tend to be overly academic-driven, which stems from the fact that Korean people place tremendous importance on academic achievement. As such, most students avoid post-secondary VET at the tertiary level. In the labor market, the wage gap between upper secondary graduates and junior college graduates that have completed vocational education has narrowed, while the gap between upper secondary graduates and university graduates remains wide. This gives people little incentive to invest in post-secondary VET;

- Due to the declining school age population, tertiary education institutions will face difficulty in recruiting potential students in the near future. The problem will likely be more acute for tertiary education institutions in local regions. In particular, the problem is more serious in junior colleges. Since the number of private tertiary education institutions is very high, the financial condition of private schools in local regions will likely go from bad to worse due the decline in the student population;

- The process of decision-making and setting policies within post-secondary institutions is closed with no involvement from stakeholders such as employers, labour unions, students and parents, and other organizations. Also, the high ratio of private junior colleges has weakened the government’s oversight of junior colleges. As such, the government’s efforts to implement reasonable and relevant policies have had little impact;

- In Korea, expenditures for tertiary education are very high, and the proportion of household or private spending as a share of total expenditures is also disproportionately high. This will likely only increase even more. This high level of private spending is a source of social problems, as students from low-income households have difficulty accessing tertiary education. As such, low-income students that can earn a future income are not able to invest in education due to financial constraints;35

- To improve quality of tertiary education, the Korean government is pursuing policies that aim to strengthen public disclosure of information requirements for tertiary institutions, establishing a funding scheme, and several measures for improving the accreditation system. However, these various policy measures are being separately implemented by different government agencies, while the information used to implement these measures are inadequate. In particular, the framework for quality assurance is very poor while the government and post-secondary institutions have not done enough in gathering the information needed.

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35 This is related to equity in tertiary education. Equity in education has two dimensions. The first is fairness, which implies ensuring that personal and social circumstances – for example gender, socio-economic status or ethnic origin – should not be an obstacle to achieving educational potential. The second is inclusion, which implies ensuring a basic minimum standard of education for all – for example that everyone should be able to read, write and do simple arithmetic (OECD, 2008).
to implement these measures;

- Training programmes in polytechnic colleges are run by the government while workplace training programs are run by employers for their own purposes. In Korea, workplace training is very poor. More specifically, workplace training offered in junior colleges is very weak. Junior colleges also do not promote collaboration with industry. Moreover, the social partnership in post-secondary VET is poor, despite the need for regional human resource development.

2) Weaknesses in Skill Signal Function

The linkage between post-secondary VETs and the skill needs of the labor market is comprised of new graduates and experienced workers. This is because the skills signal has the characteristic of being a public good. In Korea, two types of signals are transmitted. The first signal comes from the labor market, and the second signal comes from post-secondary VET. These signals are transmitted via various systems that link the supply and demand of skills. In Korea, the transmission channels include the qualification system, SHRDCs, NCS, and career guidance. The key issues for these are as follows:

- First of all, it is very important to collect and analyze information that can be put into practical use to strengthen the linkages, such as qualification, SHRDCs, NCS, and career guidance. In Korea, there is a lack of a coordinating body for basic information and for achieving cooperation among the related ministries. This basic information has to contain qualitative information on skills as well as quantitative information on the performance of human capital investments and the labor market;

- Second, vocational qualification in Korea focuses on the administration of examinations and certification. Once a certificate has been issued, it is not renewed. As a result, the relevance between the skills certified and the skills needed in the labor market is very low. Thus, the VET system fails to meet the needs of industry. The qualification system has failed to meet the skill needs demanded by a flexible labor market, technological developments and changes in the industrial structure. On the other hand, the qualification system in Korea is not linked with the NCS and SHRDC. The purpose of the qualification system and NCS is validating the credits earned by participants of lifelong learning;

- Third, since SHRDCs in Korea are concentrated in the field of manufacturing or engineering, they are not able to transmit market signals to fulfill industry needs. Specifically, SHRDCs are not meeting the demands of lifelong learning driven by the expansion of the service industry and increased leisurely or cultural consumption. Additionally, there is a lack of coordination among related ministries in regards to SHRDCs. In fact, SHRDCs are largely composed of traditional associations within an industry;

- Finally, career development services for students and adults are divided among MEST and MOEL, while the level of career counseling in post-secondary
institutions is very weak. Also, career development services for employed workers are not fully available. A collaborative system among government agencies such as the provincial education offices, employment security centers, and junior colleges and polytechnic colleges has not been established. In particular, career guidance at the secondary level is focused mainly on advising students on apply to elite universities, while not providing information or counseling about post-secondary or university programmes.

As discussed above, Korea’s post-secondary VET system needs to undergo institutional and information reform. Policy direction for addressing the issues and challenges need to be based on factors that impact post-secondary VET, such as tertiary education, qualification and skills standards, economic growth, social cohesion, and so on.

3. Policy Issues and Recommendations

1) Policy Issues

Based on the discussions of the funding structure in Korean post-secondary VET, we are able to get a better perspective for formulating policies. As we have shown in the chapters above, many factors can impact post-secondary VET such as the skill needs of industry, the qualification system, the wage structure in the labour market, unemployment rate, economic growth, social partnership, and so on. Considering the interconnectedness of each of the factors, we are able to draw policy implications.

Based on the discussions above, policy suggestions for reform are presented considering the major institutional and informational inadequacies: re-orientation of higher education system, consolidation of quality assurance, rebuilding of the information infrastructure, coping with the growth of the social service industry, and development of social partnership.

First, tertiary education needs to enhance the interface between academic and vocational education. Korea’s tertiary education institutions tend to be academically driven. This has led to a high enrollment rate in tertiary education, but graduates are having difficulty in getting a job in the labor market. This means that, there has been an over-investment in tertiary education (specifically, in universities) in Korea. Additionally, many tertiary education institutions are facing a crisis and are being forced to restructure or shut down altogether due to the rapid reduction of the school age population. Thus, the existing policies that aim to slow the expansion of academically-oriented tertiary education schools should be maintained. The basic policy direction should be to change the strong trend toward academic-oriented education.

Second, consolidating the system of quality assurance is very important to help meet the labor market needs in a knowledge-based economy. The quality assurance framework should be based on the performance of education and training programs respective to the labor market, which will need to be tracked. In particular, it is important to establish an assessment or accreditation system that encourages the
participation of stakeholders.

Third, the information system should be rebuilt to provide the basic infrastructure for skills formation and skills circulation. This includes strengthening the function of post-secondary VET, the process of qualification system, and the operation of the SHRDCs and the NCS. Also, the reform of the information system in Korea can be considered from three points of view: the education market information, the labor market information, and the information delivery system. Eventually, the reforms need to address the information gap by integrating or linking the existing systems, while rebuilding the basic framework.

Fourth, the funding system for post-secondary VET needs to be redesigned. The new funding system needs to be created based on the following three: the government, firms, and work. This means that the new funding system needs to focus on enhancing human capital investment or skills development in addition to acting as a social safety net. Also, workplace training for the youth has to be facilitated through a two-way flow of skills information between potential employers and employees (the internship system in Korea has to be rebuilt based on the new system). This system has to be designed and implemented as a demand-oriented program where both the SHRDCs and tertiary education institutions work together.

Fifth, the social services industry is a new engine of job creation driven by the advancement of the aging population. It is expected to play an important role in creating jobs for sustainable economic growth. The Korean government recently implemented policies to support non-profit social organizations with the purpose of creating jobs. However, the scope of the social service industries is wide that it affects the production and consumption of social and cultural services. As such, the skills development system needs to be reformed in order to create new jobs since skills need be developed in the non-profit sector.

Finally, social partnership needs to be promoted as part of the reforms in skills development. This includes increasing the participation of employers, labour unions, and communities (particularly at local and cultural level). This also means reforming the supply-oriented system for skills formation to a demand-oriented system. Also, an aging society requires the maximization of socio-economic productivity through partnerships among local governments, firms, workers or labour unions, VET institutions, and etc.

2) Strengths and Challenges in Post-secondary VET

The Korean post-secondary VET is not only affected by conditions in the education system and the labour market, but also economic and social conditions. The factors that impact post-secondary VET, such as the expansion of tertiary education, the low birth rate, and rapidly aging society, are proceeding rapidly, which has led to a need for highly skilled workers. Private-centralized as well as supply-oriented post-secondary VET programmes face the challenge of having to meet the demands of the students and the labour market.

First, the strengths of Korean post-secondary VET are outlined below based on the analysis above:
Post-secondary VET in Korea is very sound and strong; Korea's post-secondary VET provides students with some reasonable equity and proper skills; Korean post-secondary VET has some clear excess route; Government policymakers have a good grasp of some of the stylized facts, and are formulating policy response measures in advance such as establishing NCS (National Competency Standards) and a formula-based funding scheme; Research institutes such as KRIVET and KEDI have compiled a large amount of useful data on post-secondary VET;

Despite some of these strengths, Korean post-secondary VET faces many challenges as presented below:

- The level of wages or opportunities for career advancement fall short of the skills acquired in post-secondary VET due to Korea’s traditional seniority based compensation system;
- The system of quality assurance of education and training institutions is very weak. The student’s ability to acquire practical work experience is very poor;
- The mission statement of junior colleges is flawed, as many junior colleges are pursuing academic education, instead of vocational education which should be their original mission. Many graduates put importance on an education from a four year university. A junior college education does not usually result in a job;
- NCS and the vocational qualification system are not in line with the curriculum at junior colleges. Many junior college graduates enter the labour market with an associate degree but with no vocational qualifications after graduating;
- There are two challenges in policy implementation. In Korea, the delivery system for post-secondary VET policies is inadequate. The organizations that oversee post-secondary VET do not cooperate on formulating policies. Moreover, employers and trade unions should not be allowed to influence policy planning or making. Thus, achieving the goals of government policies in the VET and labour market are challenging due to the high share of private junior colleges.

3) Policy Recommendations

The policy issues and challenges discussed are impacted by the post-secondary VET, labour market, and socio-economic environment. The following possible policy recommendations are presented:

- Re-establishment of a junior college quality assurance system by promoting the participation of employers in the board of directors, expanding the formula-based funding scheme, strengthening the connection between workplace training and NCS (national competency standards), and so on;
- Strengthening the connection between VET programmes and qualification, based on the NCS;
Re-enforcing workplace training in post-secondary VET to cope with the skills mismatch or skills gap in the labour market;

Establishing an overarching organization or single body to coordinate government agencies, VET providers, employers or employer groups, trade unions, and NGOs.

Upgrading the infrastructure for collecting and providing information, and improving career guidance, and so on.

<Re-establishment of Quality Assurance System>

The quality assurance system should create a mechanism that enhances quality, rather than simply forcing institutions to comply with bureaucratic requirements and to report misleading information on their quality. It should develop a comprehensive framework covering all institutions. One method would be for a government agency to establish a national framework for quality assurance, and to require institutions to collect appropriate data for measuring their quality. By making data on quality available, a better understanding of the differences in post-secondary programmes may allow students to make better choices and to avoid highly costly, inefficient and ineffective institutions. The data on quality should contain the following indicators including the employers that participate on the board of an education foundation, school’s financial health and management (formula funding, etc), co-operation between the school and industry, practical use of NCS, and so on. The collection of appropriate data could be carried out by the government (such as KCCE) in the following:

- Setting up a legal basis of accreditation. The system of accreditation should contain standards of self-assessment. Unaccredited institutions or poorly assessed institutions should be excluded from accepting students that receive a loan or scholarship. However, accreditation should focus on improving post-secondary institutions rather than punishing them;
- Instituting a quality assurance framework. Individual institutions should establish their framework and be subject to periodic audits by the national agency. This would be applied to all post-secondary institutions;
- Collecting and managing the data on quality. The national agency should be able to generate information that would be useful to students, employers, and other stakeholders. Also, information should contain variables such as faculty-student ratios, the proportion of part-time faculty staff, completion rates, employment rates, information on wages, qualification exam results, and other measures of learning and employment;
- Monitoring the efforts of institutions. The national agency should develop monitoring procedures to track the institutions’ effort for improving quality. This is to intensively monitor institutions that have a poor track record in accreditation.

<Strengthening the Connection between VET Programmes and Qualification>

In Korea, students prefer to get associate degrees relative to vocational qualifications. Most students acquire an associate degree after completing post-secondary VET
programmes. However, many students enter into the labour market without a certificate and not having acquired the skills needed by industry. It is very important to strengthen the connection between VET programmes and qualifications through NCS based on the skill needs of industry.

- Expanding the development and practical use of NCS. To this end, it is important to increase the number of NCS according to the needs of industry. Next, a national agency should increase the incentive for post-secondary institutions to use the NCSs. Meanwhile, NCS should be developed in consultation with stakeholders such as employers or industry groups, labour unions, and specialists;
- Introducing the Programmes-based Certificate (PBC) system. The PBC system is a national agency that certifies students that complete VET programmes. It would be linked to the accreditation framework, and would be introduced step by step after showing an example;
- Linkage between NCS and qualification. The connection between NCS and vocational qualification can be built on the national qualification framework (NQF). NQF would be made by grouping skill units based on skills type and skills level the national agency should allow stakeholders to take part in setting skill units based on vocational qualification.
- Enhancing compatibility between qualification and degree. The recognition of learning results needs to be rebuilt on national (or technological) qualification based on vocational education to ensure that vocational qualifications are compatible with the academic education and degree. To enhance the compatibility of both, NQF (national qualification framework) can be linked with VET programmes based on the skills needed by the labour market.

<Enforcing Workplace Training>

Workplace training requires the commitment of both students and employers. Specifically, employers can provide some signal to students. Moreover, workplace training needs to play a larger role to create an incentive structure where students are not solely motivated to attain academic degrees relative to vocational qualifications. To this end, the following should be considered:

- Requiring workplace training in post-secondary VET. The objective of this requirement is to expand workplace training in post-secondary institutions by discouraging institutions and students from wanting to pursue an academic degree. The results of the workplace training should be reported to the national agency through self-assessments or accreditation;
- Developing programmes with employers. Employers or experts in the workplace (such as engineers, technicians, etc.) should take part in the development and operation of workplace training programmes.
- Establishing the incentive for workplace training. Financial incentives to encourage workplace training should be given such as direct subsidies, special tax breaks, and arrangements to share the cost burden of running training programmes.
between groups of enterprises;

- Securing the student’s safety on workplace training. In certain fields, students could be working in an environment with high hearth risks. Students that are risk adverse should have the opportunity to decide whether or not to participate in such working environments. In this case, insurance program should be made available.

<Establishing an Organization for VET>

The Korea Tripartite Commission is composed of trade unions, employer groups, and the government. However, the KTC has not been involved very much in making policies on vocational education and training. Thus, a single body for formulating VET policies needs to be established. Membership to the organization should be made open to all stakeholders such as employers, trade unions, and VET institutions. The role of this body includes the following three:

- The new organization should be able to coordinate the different policies of the central government in relation to VET. The existing post-secondary VET policies set by MEST and MOEL need to be managed by this single body based on commonalities shared between junior colleges and polytechnic colleges.
- The organization should formulate policies for regional human resource development (RHRD). It should play an important role in promoting post-secondary policies for balanced regional development.
- Also, the new organization should establish cooperative relations among stakeholders such as the central government, local governments, employer groups, labour unions, and VET institutions.

<Intensifying the Collection and Dissemination of Information>

Information on post-secondary VET has two important functions. It serves as the basis for quality assurance and governance and the source for making good choices on the part of students and employers. Information failure due to the shortage of information is another source of difficulty in implementing post-secondary VET.36 Also, less than optimal choices due to a shortage of information such as the mismatch found in education and the jobs mismatch in the labour market can result in high transaction costs for skills. Thus, the policy on information should consider the following two key factors:

- First, the infrastructure for the collection and dissemination of information on

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36 In this respect, three main types of information failures may impede policy adoption and implementation. Firstly, it has been argued that potential beneficiaries of education reform are often insufficiently aware of the benefits and as a result do not exert sufficient pressure on policy makers and stakeholders to implement reforms. A second range of information failure relate to imperfect information among stakeholders on the nature of proposed policy changes and their impact, leading them to question those changes and resist them. Finally, a number of political economy models build upon information imperfections and asymmetries to explain resistance to reforms (OECD, 2009a, pp. 327-328).
post-secondary VET and the labour market’s performance needs to be expanded. Expanding the information infrastructure should entail including all of the qualitative and quantitative information, such as data on quality assurance, programmes, and labor market performance. It should also include the function of analyzing the data collected.

- Second, career guidance and counseling needs to be strengthened. This could help change the preference of student to focus on choices that are job-driven rather than academic-driven. The function of career guidance or counseling should be provided by a national information agency based on the data on VET programmes and labour market performance.
Reference


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Annex 1. 2010 OECD-KRIVET Joint Research Outline

1. Background

The OECD was preparing a new project starting from 2009 until the end of 2011. The project is called “Programme of Work and Budget (PWP) 2011-12” promoting the OECD’s new project as “New Skills, New Jobs” and it has predicted that it will contribute to the major contents in the “OECD Skills Outlook” that will be published in 2013. The OECD became aware of the importance of skills development, and has already started to pursue the project. Meanwhile, KRIVET was also recognizing the importance of skills development that is a key component in the linkage between Korea’s VET and the labor market, and has investigated in propelling a joint research with the OECD. Afterwards, the president of KRIVET visited the OECD in November 2009 to further discuss on the progress of this project. At this time, the OECD-KRIVET joint research has been officially stated by the head of OECD EDU and the president of KRIVET.

The OECD and KRIVET both share recognition about the high importance of human resources and skills to advance the green growth of low carbon from the global warming perspective, as well as to maintain a sustainable economic growth to cope with aging society and knowledge-information generation. The subgroup of the OECD EDU (Directorate for Education), Education and Training Policy (ETP), is already completing related-project called “Learning for Jobs,” which pushes forward the 18 countries that are participating in countries’ review, to focus on VET and labor market, as well as workplace learning. It released the final paper in late 2010. This “Learning for Jobs” focuses on the secondary VET. However, most of the advanced countries have interested in politics of high-leveled skills, and additionally, the OECD also has prepared the project in post-secondary VET that starts in 2011.

KRIVET has researched on the fields of human resource development, such as vocational education, vocation training, qualification, and labor market. However, most of the studies on manpower policies were based on quantitative analysis, and the part of the qualitative research related to the curriculum development of VET programs, were focused on the supply-oriented policies. Recently, KRIVET’s researches have started focusing on the qualitative side of VET or human resource. Topics such as national skills survey and the link between education and labor market have been worked in 2010, and these researches established the basis on post-secondary VET. The contents of these researches were enlarging the importance of policies on the VET demand side.

Under these circumstances, the OECD was indentified of the necessity to suggest the alternatives by finding issues that will satisfy policy interest about skills of each countries, and KRIVET needed to find a new another perspective of research in VET’s role on skill development and skills transaction to overcome the new challenges arising.
from main factors, such as well-educated trend, higher unemployment rates of tertiary education graduates, and aging society. Through joint research, OECD and KRIVET have mutually expected findings in policy issues related to the force of sustainable economic growth needed in the OECD countries. In order to succeed in the mutual consensus, each organization has assigned a research team, and two teams officially began a joint research on June 2010.

2. Setting and Progress of Project

The OECD and KRIVET met on November 2009 at the OECD headquarters, and agreed that the core element for future growth relies on new skills for new jobs. [The president of KRIVET and staff visited the OECD headquarters, and interviewed with Art de Geus (OECD Deputy Secretary) about new skills for future’s continuous development for the first time]. Additionally, Deborah Reseveare (Head of Education and Training Policy (ETP), Directorate for Education (EDU), OECD) and KRIVET representatives have discussed on supporting the joint research project that settles the basis for PWB 2011-12 Project, “New Skills for New Jobs.” Main agenda included initiating and taking action on the PWB 2011-12 Project, and for this initiative both organizations pursue a pilot research in the 2010.

Afterwards, Deborah Reseveare, the Head of OECD EDU, visited KRIVET office on January 28, 2010. At that time, Deborah Reseveare and the president of KRIVET promised a rough outline, such as the financial support of joint research by KRIVET side, assignment of two single research teams from each part, OECD and KRIVET confirming the joint investigation, and an international seminar organized by OECD in its headquarters. Also, the Head of OECD EDU, Reseveare, suggested linking these proposals events such as the OECD Director’s Meeting in April, Leipzig Meeting in September, and Education Policy Committee (EDPC) in November. KRIVET had stated during these meetings that the organization is able to provide €80,000 in cooperating with the OECD international organization. Furthermore, Deborah Reseveare presented the main contents and details of KRIVET’s “New Skills for New Jobs,” and discussed these matters with the KRIVET team work. The OECD later certainly changed the name of the project to Skills Strategy (SS), and KRIVET cooperated to develop the mutual plan suggesting the proposal of SS project with the OECD’s “PWB 2011-12”. However, the OECD’s decision for launching the SS project was delayed.

The OECD and KRIVET finally agreed to start the joint pilot research during mid-May on Skills Beyond School (SBS) Project that is expected to be launched in 2011 by the OECD research team. The joint research was focused on post-secondary VET and skills that will be based on SBS project. Major details were agreed upon discussing a wide scope and variety of domains in the roles of post-secondary VET and tertiary education on most of the OECD countries. Also, both parts agreed that the outcomes of joint research will publish a joint report and working papers, and together will also
establish international seminars in OECD headquarters as well as participating in projects like Global HRD which was held in Seoul.

With this agreement, the OECD EDU has established a research team led by Simon Filed in Job Education Training Policy (ETP) on June, and KRIVET also assigned a research team led by Dr. Kim Hyung Man. Both institutions have already discussed on the domains of research and information during the agreement process of the two institutions after February. However, the agreement of the structured research proposal has not been executed. When both of the research teams were established, they established details on the methods and fixed schedule of gathering research, research contents, and application to the research results through the steering meeting.

The first steering meeting was held on July 7 at the OECD headquarters, and major decisions made are as follows: (1) the first draft for the OECD-KRIVET Joint Paper will be completed by November, and international seminar will be held based on the findings, (2) presentation and discussion will be held during the second half of the Global HR Forum expected to be in Seoul on October based on the preliminary research results, (3) one of KRIVET researchers will be allowed to use OECD research institute in order to assist in the joint study for 1 ½ months, (4) the president of KRIVET will give an official presentation about the current research findings during the Leipzig Event at Germany, one of the OECD’s official events (5th meeting of the group of national experts), and OECD will announce pursuing SBS project in 2011 as part of the OECD-KRIVET joint research, and (5) video meetings will be taken place periodically to discuss the projects through steering meetings.

The following three steering meetings (from the second to the fourth) were done through videoconference. The first meeting mostly focused on the discussion of what the KRIVET research team has found the scope and information about the investigation. Agendas discussed contain suggestions about including individual working papers in the following matters: skill’s formation, signal for skills and labor market, and tertiary education and lifelong learning for skills development, as well as writing comprehensive individual papers that include the three domains regarding skills in labor market. With these working papers, both teams will jointly elaborate a background report.

During the second video meeting on September 8, both parts discussed about the three important topics of the outline of research; the preparation of the international seminar to be held on November 17, the procedure and contents for proceeding joint project, and KRIVET researcher working in the OECD office. Within the outline of research, KRIVET’s team presented important policy issues predicted in the total outline of investigation, while OECD research team also presented the contents of Germany’s 5th Group of National Expert Meeting in Leipzig event – that will finish “Learning for Job” project and announce the beginning of “Skills Beyond School” project. Both sides came to reach an agreement that they will pursue OECD-KRIVET joint research defining an important base for SBS project. Afterward, OECD executed the notice
about OECD-KRIVET joint research during the Leipzig event. Also, they have agreed upon opening the OECD-KRIVET joint international seminar a day before the Education Policy Committee meeting planned to be in November 18 and 19. This seminar structure includes an opening speech from both representative, and is divided in three parts that include the OECD section, KRIVET section, and comprehensive discussion. The preparation of the event is to be thoroughly discussed with KRIVET researchers and OECD joint project.

The third videoconference took place in October 11, focusing on the detailed contents of joint research. KRIVET presented an outline about three working papers, discussed by the experts from both teams. The OECD presented the framework for the analysis of post-secondary VET and skills development of eight OECD countries. Additionally, both sides exchanged results from the Leipzig event. The international seminar to be held in November 17 is asked to have two sessions, one in the morning and one in the afternoon; the main purpose for the morning session is to present the drafts of individual subdivision papers (3 KRIVET papers and 3 OECD papers) allowing OECD specialists to discuss on the matter. The afternoon session meant to be conducted by holding three rounds that were decided upon the September video meeting along with each of the representatives that have participated in the EDPC meeting. Additionally, following the video conference, the progress report that was presented within KRIVET has identified the need to add a new researcher in the OECD research team to manage the consulting group, and consultancy from outside experts in order to point out the details closely on the research materials.

The fifth and sixth steering meeting was run by the OECD headquarters, and it mostly put attention on the joint working, and preparation and promotion of the international seminar. The joint working was made by the KRIVET researcher who worked for 38 days starting from October 17 at the OECD. The working was realized by the meeting between OECD team members and KRIVET team leader once a week. Main decisions in the meeting were made on contents that will be included for the joint project, writing the subtitles for each of the subjects, composing subdivisions of the paper, and writing results. Additionally, the hiring of the researcher and the application of outside specialists requested by KRIVET became immediately processed by the OECD, and one specialist has been recruited. There have been suggestions from the outside specialists to assist in writing a part of the paper.

During the same time, preparations for international seminar were done by selecting the moderators and panelists proceeding from each section, while also inviting Korea ambassador of OECD to give a congratulatory address along with the dinner banquet. On November 17, there were four presentations and discussion of individual papers during the morning session, while in the afternoon official event consisted of speech, presentation and debate among the three sections. It ended with the closing address. One of the nine discussants was the Undersecretary of the US Department of Education, Dr. Martha Kanter, along with 67 specialists from 27 countries, and each one with a high interest in such matters. Specifically, the contents results of the event were
introduced at the EDPC meeting, including the official OECD-KRIVET joint research and the promotion of SBS through 2011 OECD project.

Meanwhile, the sixth steering meeting is held at the OECD office with complete teams from the two parts. In this meeting, the researchers of both sides discussed on the result of international seminar, as well as on the progress condition of the research until now. The OECD research team defined what the expected rough outlines are for SBS project in 2010, and also discussed on providing the research results of OECD-KRIVET during the 6th Group of National Expert Meeting in the OECD headquarter on January 10 and 11. Along these lines, both sides have agreed to complete the OECD-KRIVET draft by January 10, 2011, and to publish the final background report by the end of the same month.

Finally, the OECD-KRIVET joint research results were presented at the 6th Group of National Expert Meeting on January 10 and 11, 2011, and it provided important points that can initiate the 2011 SBS project from these analysis results. The joint research background report was published at the end of January 2011, and individual papers also were part of the official OECD publishing.

3. Main Contents

The OECD-KRIVET joint research observes on post-secondary VET and the base of skills in the sustainable economic growth and nation’s competitiveness by solving current socioeconomic problems. This research particularly fulfills the goals in finding policy issues that can be overcome from challenges and future environment change that is confronted in post-secondary VET.

The OECD has already carried out projects related to tertiary education and secondary vocational and training, but these projects did not research and analyze on post-secondary VET that meet interests in advanced skills development for a country’s continuous economic growth. Korea is also at an important point where new alternatives are needed to further advance skills development to leap into advanced country status and to solve problems of aging population and the job creation for high-educated people.

By taking these points into consideration, this research diagnoses on topics such as the new challenges for post-secondary VET, the transaction of skills that acquired by job training, and the demand of skills in labor market. On the bases of the result of these diagnoses, this paper attempt to find policy issues that can be solutions to the future environment.

<New Challenges of Post-secondary VET>

In the OECD countries’ labor market, the demand for high-levels skills and professional skills has been rapidly increasing in post-secondary VET, and post-
secondary VET has faced with three kinds of policy challenges. The first challenge is the problem of balancing the programs with academic-centric institutions and also with vocational education institutions. The second challenge is the problem of whether or not post-secondary VET programs sufficiently fulfill the quality level. Finally, the third challenge is if the connection between the post-secondary VET and industries are strong enough to correspond to the needs of the labor market.

In case of Korea, (1) it has been demanding to change into high level or creative skills formation system of knowledge-information and globalization generation from the simple skills formation system of industrialized generation, (2) while the high-educated group of the population is quickly expanding, it is a necessity of new job creation for youth adult since tertiary education graduates are continuing to face hardships in getting job, and (3) post-secondary VET is very important to cope with diversified skills demand that appear from a decrease in the low birth rate of student population and the retirement of the baby boom generation. Korea is being confronted by challenges that need to handle the demand and supply side in post-secondary VET.

Most of the OECD countries are going to be classified as countries that demand qualification of post-secondary level in labor demands in current and future labor markets, while on the other hand, the demand for low skills are expected to gradually decrease. This will allow most countries to fulfill the skill demands, indicating that it emphasizes on post-secondary level in order to coincide with the student’s demand. Some countries either satisfy skills demand by specific institutions or tertiary education. The increase in vocational education has led in a huge growth in diversified tertiary educationand postsecondary VET. Such diversified forms of post-secondary VET means that it simultaneously confronts new challenges.

**<Post-secondary VET and Skills Development>**

Each country has various forms for post-secondary education giving the right of autonomy in education institutions, and post-secondary VET are also provided in regular universities or institutions. There are OECD countries that practice uniform governance and financing systems, while there are also countries that have different forms of governance and financing systems based on the institutions. Also, many countries do not have a clear classification of vocational education and academic education form post-secondary level.

In case of Korea, post-secondary VET in regular tertiary education included traditionally junior college, polytechnic college and industrial university. However, while engineering schools and four-year universities have focused on the humanities education, these schools have started to emphasize heavily on the importance of vocational education due to the low employment rate of tertiary education graduates. Adults also develop their skills by attending vocational training and continuing education. Vocational training and continuing education traditionally was designed for low academic and disadvantage people, but there has been a large increase in the
importance on post-secondary VET of high-level skills to satisfy the demand of high-levels skills for adults.

On the other hand, there is an argument that the number of drop outs of students in VET institutions increase when there is a raised access of post-secondary schools in OECD countries like Australia and the United States. Also, it is argued that countries like Finland and Portugal that limits choices can improve student’s quality in VET. However, the contradictory relationship of gap between access and drop outs does not exist really in many other countries. It has been found that the combination of cautious planning and cooperative strategy can increase the access as well as increase the completed study. Many countries that have a main goal to increase the participation of post-secondary level produced positive results like New Zealand. While the dropout rate in tertiary education is very low in Korea, the transfer rates from junior colleges and local universities to prestigious colleges in Seoul are very high. This indicates how there is an over-education investment on formal education institutions in higher education level while there are cases where the investment for vocational education is lower.

To finance higher education, in many countries the public sector has the main role, but in Korea, the expense of education costs from student’s parents are 70% of finances, and tertiary education institutions that are privately owned are also high consisting of 89%. Such governance and finance structure makes it a necessity to have policy change to allow education consumer to control their education choices rather than letting the government maintain control over the policies in higher education level.

Meanwhile, the government has led in levy-grant system in vocational training for adults. And, the participation rate from SMEs for job training is very weak, and there is no system that provides opportunity of investing education training in a phase where tertiary education graduates are trying to enter the labor market after finishing schools. The investment for lifelong education is very petty, and so the trend shows that the role of private sectors is increasing. This shows how the potential for demand creation in social education and training is very high. However, the shape and direction of education and training in social service cannot be set up although this field has a very high domain in the possibility on the job creation of the future.

Many European countries enforce a traditional method where students after graduating have opportunity of learning at workplace; nowadays, it is transforming active workers. However, the condition for workplace learning as well as on-the-job training is very weak, and most of the individual companies operate this method of learning to secure their specific skills. Also, while the skills formation of internal system to prepare people for the future world is very active in other countries, Korea recently started without being able to regard the investment of human capital.
The Linkage between supply and demand for skills

Having a good connection of demand and supply for skills depends upon the reaction of the signal that is made by the information’s flow. Also, according to change of knowledge and technology, skills demands appeared with shapes such as the creation of new jobs, innovation of production mode, and the variety of service. Eventually, this skills demand is related with the social education and training and green growth. The good quality in information comes from the exact observation about the changes in demand patterns based on occupation as well as the labor market performance of education and training. Additionally, such information has the function with the signals of the labor market, and such signal becomes the foundation in constructing education and training program. Also, the good quality of information allows career guidance to effectively combine the labor market needs.

Furthermore, the positive information about the labor market needs is that it has an important function in setting up qualification criteria to measure skills that is acquired through education and training. The qualification provides to the employer the signal about skills that individual acquire through education and training. The qualification includes degree and vocational qualification. The degree is obtained as a skill signal through formal education process, and in Korea, it is usually a signal function for academic-centric skills. Vocational qualification is mainly offered through the VET, signaling the necessary competency by fulfilling duty in occupancy. While the degree in Korea is issued by formal education institutions, vocational qualification is issued by the government. However, vocational qualification focuses on policies on issuing the licenses; there is no device that can reflect on the change in skills after receiving the qualification. Also, the base of this device needs to be created and propagated on the information regarding labor market and VET. In Korea, the system of creating and propagating information is very weak.

In Korea, Sector Human Resource Development Council (SHRDC) has to create and propagate qualified information, and such information not only reflects the VET program but also function as an important device for issuing the qualification certificate. However, SHRDC cannot create good information, and is not able to construct bases on the connection between VET and industry needs.

Policy Issues

Policy issues for OECD countries in macroscopic level include (1) strengthening vocational education to fulfill the balance between vocational education and academic education through post-secondary VET program, (2) improving quality of post-secondary VET to reflect labor market needs in knowledge-information era, (3) strengthening the link between VET and labor market (especially in strengthening the function of qualification), (4) improving social fairness in education training along with improving student’s school choice and academic results, and (5) reestablishing financing and governance.
Policy issues in Korea are comprised into seven parts. The first part is based on reestablishing the function of vocational education in tertiary education. The junior colleges that provide vocational education should strengthen the function of education and training connected with local community and business, and four-year university should strengthen college support in the specified vocational education, specifying into research-oriented university and vocational education-oriented university.

Second, it should strengthen the quality of post-secondary VET. Junior colleges and universities that focuses in vocational-centric specialization lets the industrial specialists to participate to bring up high-skills and creative skills, and SHRDC and universities evaluation committee both discuss on the financial support on the ground of the result that evaluated the performance of human resource development.

Third, it needs to construct an information system that base upon the signal of labor market’s skills. The information of labor market and VET market gets systemized, and on the basis of the information, it is important to establish the skills standards through the cooperation among postsecondary VET, SHRDCs, and government in order to reflect on VET program and qualification system.

Fourth, it needs to rebuild the financing system. Lifelong learning and vocational training are mutually dependent, and it needs to build the new financing system for post-secondary investment of adult. It is that the new financing system is jointly shared by three bodies of employer, the government, and work (under the current unemployment insurance system, employers all bear the expenses of the employer for vocational skills development). This new scheme aims to enforce the present vocational skills development system as well as to expand on the investment in post-secondary VET for the adult’s lifelong learning. The future of vocational education and lifelong learning are expected to be diversely mixed between job-oriented learning and consumption-oriented learning. Also, the job-oriented learning opportunity will be ensured through rebuilding the system of obtaining and distributing finance to all of employer, worker, and government, because they all have benefits from investment in postsecondary VET.

Fifth, it needs to maximize the function of postsecondary VET in private sector. In vocational training and lifelong learning, strengthening private’s role will not only be the means of diversifying learning and skill demands, but expending learning opportunities by shifting government-oriented VET form to consumer-oriented VET. For upgrading the quality of postsecondary VET, in governance of tertiary education, the role and device for private should be strengthened even in vocational training led by the government.

Sixth, it needs to expand the education and training program with a relation to the social service. The job creation of the future should be made through the social service sector, and it needs to reestablish the system of social education and training (SET). The SET program that is connected to future job should be developed in order to
provide the basis of education and training to raise industrial production with relation to industry in leisure and cultural consumption.

Seventh, it needs to strengthen social partnership. This shares a related policy in the management of post-secondary VET. The social cohesion is also strengthened by post-secondary VET that connects with region and industry by the participation of the employer, labor union, and regional community. The social demand in lifelong learning especially is quickly increasing. Additionally, such increase is expected to continue its growth, such change will strengthen the maneuver in partnership.

4. The Pursue after This

The results from the research are applied to the base of Skills Beyond School (SBS) promoted in part with the OECD’s PWB 2011-12. The 2011 SBS project supported by the OECD Directorate for Education (EDU) will focus on participating country’s case study, and it will shape each of the country’s research. The OECD’s country study will be starting from February and June 2011, and there are going to be country’s on-site research along with analysis research. The country study will be concluded by publishing the paper of the analyzed results on February 2012, and post-research opportunities are expected to take place in 2012.

The KRIVET does not want to narrow the study in Korea country’s review about SBS project, therefore KRIVET and OECD will try to push for a new cooperation towards related project’s initiatives. The OECD-KRIVET will additionally include country studies to analyze along with social education and training (SET) in social service, postsecondary VET for the young adults in aging generation, and it will carry out an in-depth analysis on private-oriented lifelong learning and private qualification. The impetus of Korea’s future economic growth can be achieved by high skills level and technological advancement, but the job creation needs to be established mostly in new fields like social service, and the performance needed in these jobs cannot be based in low and middle leveled skills. High leveled skills can be achieved through postsecondary VET. By considering these points, it is important to carry out a research that pertains to this new territory that will carry out the qualification and postsecondary VET for new job creation. Based on the results from this research, these results will be important in contributing to the commemorative event of OECD’s 50th year and the international meeting that is co-sponsored by OECD EDU and KRIVET.

Meanwhile, the OECD and KRIVET have decided to release a joint research every year as part of constructing cooperative system of mutual development that vitalize the strengths of this joint research, and it will promote in the exchange of manpower. To carry this out, such cooperative system will be publicly made official and KRIVET and OECD will try to build links with the MOU.
Annex 2. Guidance and plan of OECD SBS project

A. SKILLS BEYOND SCHOOL: GUIDANCE FOR COUNTRIES ON BACKGROUND REPORTS AND COUNTRY REVIEWS

EDU/EDPC/CERI(2010)11

1. This note provides information for countries engaged with Skills beyond School, the OECD review of postsecondary vocational education and training. It provides guidance on:
   i) how to prepare country background reports; and
   ii) the process for country reviews.

2. The overall project plan for the exercise, [EDU/EDPC(2010)21], sets out other arrangements for the review, including costs, timelines and governance.

Country background reports

General

3. All countries are invited to prepare a background report, whether or not they will have a country review. The background reports are designed to:
   • Provide a succinct description of the postsecondary VET system in each country as a basis for policy analysis.
   • Provide a framework in which each country can assess the strengths of their system and the challenges they face, as a basis for policy development.
   • Give countries the capacity to compare their own approach with those of other countries, as a means of mutual learning.
   • Provide the background information and a self-assessment to be drawn on for the OECD country review, where one has been requested.

4. Background reports should be drafted in English or French. They should contain descriptions of the postsecondary VET system, relevant statistics and research information, and a self-assessment of strengths and challenges. Where the relevant information is already available in English or French electronically, it will be sufficient to describe it briefly and provide a hyperlink to the relevant material, or attach an electronic copy. Given this point, and the widely differing circumstances and requirements of countries, no specific guidance on the length of country background reports is offered by the OECD.

5. Background reports should be completed by the end of 2011, but those countries wanting an earlier country review will need to complete their background reports earlier, as draft background reports are necessary in advance of country visits. The OECD will provide comments on the draft background reports but the contents and quality of the final draft remains the responsibility of the country. Once finalised, country background reports will be published on the OECD website.
6. Those countries financially contributing for a background report that have not opted for a full country review will receive a short visit to the country by an OECD team and a brief published commentary on the background report. The arrangements for these visits will be individually negotiated between the OECD and the countries concerned.

**Background report outline**

7. The background report should be structured along the following lines.

**Description**

*i) Scope: programmes*
- Which programmes would you define as post-secondary VET in your country?
- Which fields of study do they cover and what types of career do they lead to?

*ii) Scope: institutions*
- What types of institutions provide these programmes?
- What is the mix of private vs. public institutions? (data)

*iii) Statistical overview*
Please provide summary statistics showing i) the current position, and ii) trends over the last 10 years in:
- Student numbers in different postsecondary VET programmes.
- The share of students enrolled in post-secondary VET programmes.
- The make-up of the student population in terms of age/gender, educational background and field of study, and social background.
- Drop out or completion rates (and how these are defined).
- Labour market outcomes from postsecondary VET programmes.
- Trends in demand and supply for different skills (disaggregated by level and type of study (post-secondary, tertiary, VET vs. general education) and field of study.
- Transitions into other educational programmes including academic tertiary programmes.

*iv) Mix of provision*
- How do you determine the mix of provision of post-secondary VET (which programmes, how many places in each programme)? What role does evidence on labour market needs play in determining the mix of provision and how is this information acquired?
- Which stakeholders are involved in determining the mix of provision? Through which institutions are their views expressed?

*v) Workplace training*
- What role does workplace training play in the delivery of these programmes?
- Are there any forms of quality assurance in workplace training?

*vi) Access routes, second chance opportunities and equity*
• Do barriers exist preventing students from moving between levels of education?
• What role does the post-secondary VET system play in providing second chance opportunities to students who want to re-enter the system?
• What kind of equity function does post-secondary VET play with regards to integrating disadvantaged groups?

vii) Transition to the labour market
• Please provide data, if available, on returns to different types of education including postsecondary VET (by level and field of education)?

viii) Steering and governance
• Please describe the steering arrangements for postsecondary VET programmes and institutions.
• How are responsibilities shared between central and regional levels of government?
• How are the different forms of institutions governed? What degree of autonomy, do they have in determining their staff, education offer and use of resources?

ix) Funding and incentives
• What is the balance between public funding, employer-provided and individually purchased post-secondary VET? (data)
• Is there a difference in government funding of post-secondary vocational as opposed to academic programmes? (data)
• What financial incentive mechanisms encourage individuals, employers and providers to engage in post-secondary VET? (data)
• What kind of student funding arrangements are in place? Are student fees subsidised? (data)

x) Social partners
• What roles do social partners (employers and trade unions) plan in the system? Through which institutions?

xi) Qualifications framework
• Does a national qualifications framework exist? If yes, how is it structured and how does it bear on these programmes.

xii) Teaching
• What are the qualification requirements for teachers and trainers in postsecondary VET programmes and institutions? How are they prepared for the job? What kinds of teacher quality assurance mechanisms are in place?
• Are there problems of teacher/trainer shortage (data)? If yes, how are they tackled?
xiii) Career guidance
- Please describe arrangements for career guidance for students in the course of their postsecondary VET programmes, and for those potentially choosing such programmes.
- How are the career guidance professionals prepared and trained for their work?
- What career information base is available to students and career counsellors?

xiv) Quality assurance
- Please describe how quality is assured in postsecondary VET programmes (other than in workplace training).

xv) Policy development and initiatives
- Please briefly describe how policy in this field has evolved over the last 10 years.
- What developments and initiatives have taken place recently – or are in planning?

Self-assessment: strengths and challenges

A checklist
- Do the programmes on offer reflect labour market needs sufficiently?
- Is high quality workplace learning sufficiently well-integrated into the programmes on offer?
- Is there evidence of mismatch between the labour market skills provided by the education system and those required by the labour market? Could postsecondary VET programmes do more to fill the gaps?
- Are career guidance arrangements adequate?
- Do funding arrangements provide the right incentives for the different stakeholders?
- Are teachers and trainers in postsecondary VET sufficiently well-prepared, both in terms of pedagogical skills and practical industry experience?
- Do the programmes grant sufficient access to all those who could benefit?
- Are employers and unions sufficiently engaged, nationally, locally and sectorally, in the planning and delivery of provision?
- Are data regularly used by stakeholders to evaluate programmes?

Self-assessment in summary
- What in your view are the most important strengths of the post-secondary VET system? Are there examples of particularly good practice or innovative approaches worth sharing with other countries?
- What are the main challenges confronting the post-secondary VET systems?
- What lines of policy development are needed?
Country policy reviews

An overview

8. Country reviews are a central element in *Skills beyond School*. In country reviews, an OECD team offers analysis and assessment of the strengths and challenges of a country system, and makes policy recommendations, drawing on international experience and comparative analysis. The primary function of a country policy review is to assist the reviewed country with policy development, but they also provide a very important input into reviews of other countries, and into the broader policy messages for all countries that will be reflected in the comparative report.

9. An overview of the steps in their preparation, and the associated timeline, is set out below.

<table>
<thead>
<tr>
<th>Month and Timing</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 (6 months before preparatory visit)</td>
<td>The OECD team and the country agree timetable and scope of the country review. Background report in preparation by the country.</td>
</tr>
<tr>
<td>5 (1 month before preparatory visit)</td>
<td>Background report delivered in draft, OECD team and national co-ordinator agree programme for preparatory visit.</td>
</tr>
<tr>
<td>6 (6-8 weeks before policy visit)</td>
<td>PREPARATORY VISIT 4-5 day visit to examine the facts, and identify key policy issues.</td>
</tr>
<tr>
<td>7 (4-5 weeks before policy visit)</td>
<td>Follow-up questions on key policy issues posed to the country by the OECD team.</td>
</tr>
<tr>
<td>8</td>
<td>POLICY VISIT 4-5 day visit to explore key policy issues and options to address challenges.</td>
</tr>
<tr>
<td>10 (6 weeks after policy visit)</td>
<td>The OECD team delivers an outline of the report to the country. The country will provide its comments within 2 weeks.</td>
</tr>
<tr>
<td>12 (4 months after policy visit – firm deadline)</td>
<td>The OECD team delivers the draft country policy review to the country. The country provides its comments to the OECD team within 3 weeks.</td>
</tr>
<tr>
<td>14 (6 months after policy visit)</td>
<td>If country comments received on the timetable above, the final draft of the country policy review is published on the OECD website.</td>
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B. BEYOND SCHOOL. THE SCOPE AND POLICY FOCUS OF THE REVIEW

EDU/EDPC/CERI(2010)12

1. Further to the project plan for Skills beyond School, the OECD thematic review of postsecondary vocational education and training (VET) - EDU/EDPC(2010)21, this paper sets out explanatory proposals regarding (a) the scope of the exercise, and (b) policy topics for examination and their prioritisation.

Scope

2. When looked at across countries, vocational education and training above secondary school level is characterised by a diversity of institutions and programmes of varying lengths, fields and modes of study. But these diverse forms of provision often have similar objectives – in terms of the preparation of people for careers in higher level technical, professional and managerial positions. One aim of the review is to ensure sufficient breadth in its scope to compare radically different modes of vocational preparation yielding equivalent competencies, and similar jobs and careers. On this basis it will be possible to share experience and explore policy options for better delivery. One aim of the review is to provide a sufficiently broad scope to encompass diverse systems of postsecondary VET, while allowing for meaningful comparability.

3. The definition of postsecondary VET in terms of programmes and institutions is set out in EDU/EDPC(2010)21 (paragraph 12).

Programmes of one year or more (full-time equivalent) in length, beyond upper secondary level (ISCED 4, 5 and 6) leading to recognised qualifications. They would be vocational in that they are designed for, and typically lead to, a particular job or type of job. Institutions whose main focus is the delivery of such programmes.

4. This definition will be a broad guide to comparative analysis. At the same time, as with all definitions designed for many countries, it may not effectively capture important programmatic and institutional boundaries in some countries, either because some nationally very relevant programmes lie outside this definition (for example short programmes) or because there are important distinctions within the definition (for example between tertiary and non-tertiary programmes). To reflect this point, individual country studies, including country reviews, will be handled flexibly so that their scope can be narrower than the primary definition, and they may also address programmes outside the core definition, subject to the need to preserve comparability with other reviewed countries.

5. Across countries, the diversity of approach to delivery is very much part of the subject matter of the study, and as part of the review exercise, a classification of different types of postsecondary VET will be drawn up – showing for example shorter programmes, bachelors programmes, professional examinations. This classification will both help to clarify the dimensions in which countries differ, and offer a framework to identify any limitations of international comparison. As an initial step in this exercise, key programmes and institutions responsible for delivering postsecondary VET will be identified in OECD countries.
Policy focus
6. The over-arching objective of the review is to assist countries to make their postsecondary VET systems more responsive to labour market needs. The project plan [EDU/EDPC(2010)21] discusses a number of potential policy questions which arise in the field. Within that framework, the following policy issues have been identified as potential topics for examination. The list draws on previous work, including the frameworks of policy analysis developed in previous thematic reviews of vocational education and training and tertiary education (OECD, 2008, 2010).

1. The mix of provision – in terms of (a) the numbers of training places different fields of study and (b) the makeup of each field.
2. Workplace learning: quantity and quality.
3. Access routes, second chance opportunities and equity (initial scoping paper in preparation).
4. Steering of the system and governance of institutions.
5. Funding and incentives – for institutions, students and employers.
6. Employers and unions engagement in guiding the system, determining qualifications and delivering training.
7. Qualifications issues. (a) Qualifications and assessment – qualification through measures of input (time of study) and output (measured competences); recognition of prior learning. (b) Qualifications frameworks – can they support the system?
8. Teaching and training: teaching careers, the preparation and professional development of teachers and trainers.
9. Career guidance, for those (a) choosing, and (b) pursuing postsecondary VET. (Initial scoping paper already available).
10. Quality assurance.
11. Data issues: international comparability; labour market outcomes.

7. While all these issues will arise in the course of the review, and priorities will be set to an extent by the interests and concerns of reviewed countries, some initial priorities are desirable to ensure adequate focus in the analysis undertaken – including the preparation of working papers on particular topics.

8. Country delegates are invited to indicate their preferences among the competing topics, and add any further topics as they see fit.

REFERENCES
C. SKILLS BEYOND SCHOOL: POST-SECONDARY VET PROPOSED REVIEW PROJECT PLAN

EDU/EDPC(2010)21

Summary
1. A thematic review of postsecondary vocational education and training (VET), Skills Beyond School, will form part of the OECD’s programme of work for 2011-12. This study will cover policies specifically targeted on post-secondary vocational programmes and post-secondary vocational institutions. In addition the review would take account of policies which, while not specifically targeted at vocational programmes, bear on them significantly – for example, government financial support for tertiary education. This paper sets out proposals for how the work should be undertaken.

2. There is growing demand in OECD labour markets for the higher level technical and professional skills for which post-secondary VET prepares, and rapid growth in this sector. These developments raise major policy challenges, such as:
   - Whether the balance is right between more vocational institutions and programmes on the one hand, and more academic ones on the other.
   - Whether the postsecondary VET programmes on offer are of sufficient quality.
   - Whether the links between postsecondary VET and industry are sufficiently strong to deliver programmes which are responsive to labour market needs.

Other challenges relate to inclusion, access, finance, governance, teaching quality, integration with workplace learning, articulation with other sectors of education, qualifications and assessment.

3. Skills Beyond School will provide policy advice to countries on how to address these challenges, building on the success of Learning for Jobs which examined vocational education and training policy through 17 country reviews and a comparative report. The new thematic review will also be conducted through comparative analysis across all OECD countries and country reviews in individual countries. A final comparative report will draw together key policy messages with an initial draft made available to countries by the end of 2012.

4. All countries will be invited to prepare background reports. Countries may then opt for a country review, which requires a voluntary contribution of EUR 98 000, or they may provide a voluntary contribution of EUR 28 000 in return for which the Secretariat will provide a short commentary on the country background report after a short visit.

5. EDPC delegates are invited to:
   - COMMENT on the policy issues identified in the paper.
   - AGREE to the overall project plan.
   - INDICATE their interest in participating, whether through a full country review, or a background report and commentary.
Introduction

6. A thematic review of postsecondary vocational education and training (VET), *Skills Beyond School*, will form part of the OECD’s programme of work for 2011-12; preparatory work is now under way. This paper sets out proposals for how the work should be undertaken. An earlier draft was discussed on 27 September by the Group of National Experts on Vocational Education and Training. The Group welcomed the proposal, and requested some further details regarding the scope of the work [see EDU/EDPC/CERI/M(2010)2]. This draft aims to provide these details. A final version of this paper reflecting the additional guidance of the Education Policy Committee, will become the agreed project plan and be presented to the Group of National Experts on Vocational Education and Training on 10-11 January 2011.

7. The project plan is in three parts. The first part deals with the substantive policy challenge – why the work is needed, the scope and objectives, and the policy issues which might usefully be examined. The second part describes the proposed outputs and the third part addresses practical arrangements such as governance, financing and timetables.

The policy challenge

Why the work is needed

8. Increasingly OECD countries look beyond secondary school to higher institutions of learning to provide the skills needed in many of the fastest growing technical and professional jobs. The broader growth of education means that increasing proportions of the youth cohort seek postsecondary (rather than just upper secondary) qualifications as the final stage of education before entering the labour market. This reflects growing demand for higher level skills in many countries. In the US, for example, recent research suggests that the proportion of jobs requiring postsecondary education more than doubled between 1973 and 2008, from 28% to 59%, and this trend looks likely to continue (Carnevale, Smith and Strohl, 2010). In Germany projections to 2020 suggest that nearly all the increases in demand for labour between now and 2020 will be for occupations requiring postsecondary qualifications, while demand for those with intermediate or low skills will stagnate or fall (Autorengruppe Bildungsberichterstattung, 2008). This suggests that many countries may need to give increased emphasis to vocational education and training at postsecondary level, both to fill the required skills needs, and to meet student demand.

9. Some countries are meeting these needs through a special tier of institutions, but traditional and non-traditional universities also house many vocational programmes. Nearly everywhere, the expansion of vocational programmes has been a major driver in the broader growth of tertiary and other forms of postsecondary education. This includes some major emerging economies. In China enrolment in postsecondary vocational colleges rose to around 3 million students in 2007, a dramatic expansion from less than half a million in 1998 (Shouguang, 2008).

10. These developments raise major policy challenges, such as whether the balance is
right between more vocational institutions and programmes on the one hand, and more academic ones on the other; whether the postsecondary programmes on offer are of sufficient quality; and whether the links between postsecondary VET and industry are sufficiently strong to deliver programmes which are responsive to labour market needs. Other challenges relate to inclusion, access, finance, governance, teaching quality, integration with workplace learning, articulation with other sectors of education, qualifications and assessment.

11. *Skills beyond School* will provide policy advice to countries on how to address these challenges. It will build on the success of *Learning for Jobs*[^37] — which examined vocational education and training policy through 17 country reviews and a comparative report - and also draw on the OECD Review of Tertiary Education (*Tertiary Education for the Knowledge Society*[^38]). It will also feed into the horizontal OECD *Skills Strategy*, which will provide a link to PIAAC and other initiatives related to skills across the OECD. It will therefore fill a gap, exploiting recent experience, but not being limited to it.

**Scope and main objective**

12. It is proposed that the main objective of *Skills Beyond School* should be to help countries make their postsecondary VET systems respond better to labour market needs. This goal, in the context of *Learning for Jobs*, received wide support from OECD countries. To this end, the study will be concerned with policies bearing on a set of programmes and institutions.

- **Postsecondary vocational programmes** of one year or more (full-time equivalent) in length, beyond upper secondary level (ISCED 4, 5 and 6) leading to recognised qualifications. They would be vocational in that they are designed for, and typically lead to, a particular job or type of job. They would therefore include, for example a one year diploma in engineering, a two year associate degree in dental hygiene and some professional bachelor degrees – for example a four year programme in food science. The study would not be concerned with programmes in the arts and sciences providing a general educational preparation. Postgraduate programmes, requiring a previous qualification at bachelor level would also be excluded.

- **Postsecondary vocational institutions** where the majority of teaching is on postsecondary vocational programmes as described above. These would include, for example, community colleges in the United States, polytechnics in Finland, junior colleges in Korea, technical and further education (TAFE) institutions in Australia, instituts universitaires de technologie (IUTs) in France, and Fachhochschulen in the Germanophone countries.

13. Policies specifically targeted at such programmes and the associated institutions would be the prime target for the review. In addition the review would take account of policies which, while not specifically targeted at vocational programmes, bear on them

[^37]: www.oecd.org/edu/learningforjobs
[^38]: www.oecd.org/edu/tertiary/review
significantly – for example government financial support for tertiary education. Individual country reviews will often address only a subset of such programmes and institutions, according to the particular policy priorities of the countries concerned.

**Policy questions to be addressed**

14. To deliver relevant and constructive policy advice, the review will be designed to address the most pressing policy concerns of countries, both in the comparative analysis and individually in the country reviews. These will be identified in dialogue with countries. In the first instance, some suggested policy questions grouped around four themes are set out below, drawing on the analysis of VET in *Learning for Jobs*, of *Tertiary Education for the Knowledge Society*, and other OECD activities.

**Effective institutional frameworks, funding and governance**

15. Countries use a variety of institutional arrangements for post-secondary education and with a general trend towards greater autonomy for education institutions, the range of offerings is becoming more complex and dynamic. Vocational preparation in postsecondary programmes may be offered at dedicated vocational institutions, within regular universities, or in multi-purpose institutions. Some countries provide a unified governance, funding and strategic oversight framework while others have distinct approaches for each type of institution.

16. The cost drivers in provision are not always well understood, and when funding is tightly regulated there may not be sufficient incentives for countries to innovate, or seek out more cost-effective means of delivering their programmes.

17. Different forms of vocational and academic postsecondary education are often poorly articulated. Transfers across institutions and between different study programmes at the same level are often made difficult and transition to a higher level (e.g. from a VET diploma to a university degree) may be difficult or impossible.

Questions:

- How can institutional frameworks, funding and governance arrangements be designed to:
  - Encourage the appropriate and efficient balance between post-secondary VET and academic programmes?
  - Ensure that providers respond to labour market needs?
  - Offer adequate incentives for innovation and efficient provision of programmes?

- Which tools (e.g. qualification frameworks, articulation agreements, recognition of prior learning) are most effective in facilitating sideways and upwards mobility within postsecondary education?

**A better match of supply and demand for skills**

18. Getting a good match of supply and demand for skills requires both an effective flow of information and the ability to respond to it. The demand factors include changing skill
requirements within jobs – often driven by technology; increased demand for certain existing occupations (e.g. health sector workers as the population ages); and new types of jobs, driven by innovation in products and services or by societal demands (e.g. for greener growth).

19. High quality information is needed about shifting patterns of occupational demand and the labour market outcomes of different study programmes at different institutions. Supported by strong career guidance to interpret such information in relation to the needs and concerns of individual students, this should allow students to make better-informed choices when they invest in further education and make career choices.

20. Post-secondary VET providers need to be able to adjust their programmes quickly and flexibly in response to shifts in demand. This requires autonomy but also a thorough understanding of labour market developments, linkages with employers and the capacity to manage student demand for places with longer-term and strategic decision-making. Effective career guidance can also help to match the mix of provision to labour market needs, by encouraging students to invest in relevant skills.

21. As well as requiring technical skills, employers are often concerned about the job-readiness of postsecondary graduates. Close relationships between providers and employers can help strengthen providers’ understanding of job-readiness skills and facilitate the work placements that offer a strong learning environment and facilitate transition to employment. But relationships between providers and employers may be too distant for effective communication and many VET programmes lack the substantial, good quality workplace learning necessary to build effective workplace skills.

Questions:

- What steering mechanisms are most effective in reconciling student preferences and employer needs?
- How can career guidance services be developed to assist both individual students in their career plans and study choices, and help to meet labour market needs?
- How can providers become more responsive to labour market needs both in the mix of programmes they offer and in the content of each programme?
- What are the most effective ways to blend programmes and workplace learning to strengthen job readiness skills?
- What are the most effective channels for getting employers and trade unions effectively engaged with the postsecondary VET system?

Better quality in postsecondary VET

22. VET programmes need to offer high quality teaching and learning and produce graduates with a clear set of competencies. Many of the proxies used to assess quality in universities, such as publication rates, ability to compete for research funding and academic qualifications of faculty, are even less relevant to VET programmes and measuring the quality of vocational teaching is challenging. The quality of VET programmes needs to be verified whether through internal and external review, or other means.
23. Teachers and trainers are the key to quality in postsecondary VET as in general education. They need a career structure designed to help them develop an appropriate mix of pedagogical skills, academic knowledge and up-to-date industry experience.

24. Making quality transparent is a first step. The next step is to provide incentives for quality improvement. Often this will be through well-informed students choosing better institutions. But local monopolies in provision abound, and many students may find it difficult to move residence to study.

Questions:
- Which quality assurance tools are best adapted to vocational programmes, to support quality improvement and underpin accountability?
- How can career management arrangements for postsecondary VET teachers and trainers ensure that they have the right mix of skills, including relevant industry experience?
- How can funding and governance arrangements provide sufficient incentives for improvements in the quality of postsecondary vocational programmes?

25. Alongside the need to provide skills for the labour market, postsecondary VET in many countries often aims to provide educational opportunities for those less academically inclined, non-traditional students and those wishing to pursue a new career as adults. Meeting multiple objectives and expectations may present particular challenges to VET providers. At the same time, many entrants lack information on postsecondary options and are poorly prepared for postsecondary studies: drop-out rates are often high.

26. Many postsecondary vocational students come from disadvantaged backgrounds and they do not always have access to the same sources of financial support as their peers in more academic programmes. Differences in access to public funding reflect sometimes historical factors and insufficient policy responses to the expansion of a new postsecondary sector, rather than a rationale based on some principles.

Questions:
- How can selection criteria, student support and guidance ensure flexible pathways of entry, while maximising successful completion?
- How can common principles be developed to underpin the funding of postsecondary education and ensure that resources are distributed across providers and students in ways that promote equity and efficiency?

27. The capacity of postsecondary VET systems to meet labour market needs is one element of the broader challenge of how to meet the skills needs of the economy. Many strands of OECD work are addressed to this question and in recognition of this an OECD Skills Strategy proposal is under development, which would group the Skills Beyond School project with other OECD outputs in a crosssectoral approach (see Box 1).

28. If the OECD Skills Strategy is agreed, it will provide some modest additional
funding for the *Skills Beyond School* project allowing the preparation of an analytic report covering available evidence on higher level technical and professional skills (focusing on those delivered by postsecondary vocational programmes) and their utilisation in the labour market, including evidence on trends over time.

**Box 1. The OECD Skills Strategy Proposal**

The OECD Skills Strategy is a proposal for OECD work put forward by the Secretary-General. The OECD Council will discuss the proposal in the final quarter of 2010 and make a decision on its inclusion in the Organisation’s programme of work and its funding.

The Skills Strategy will build on a range of existing and planned OECD activities, including the new *Skills Beyond School* proposal, the completed *Learning for Jobs* project and other EDU country reviews, ELS projects on *New Skills for New Jobs* and *Jobs for Youth*; PISA, which examines the effectiveness of school systems to generate foundation skills; the LEED projects on *local skill strategies, training and skills development in SMEs* and *skills for competitiveness*; and the STI *skills for innovation project*. The OECD Skills Strategy provides an opportunity to link these activities effectively and to build synergies to strengthen their impact.

The strategy seeks to assist countries in improving economic and social outcomes through better skills and their effective utilisation. More specifically, it seeks to support: responsiveness, quality and efficiency in learning provision, flexibility in provision, transferability of skills, ease of access and low costs of early exit.

From 2013, a regularly published *OECD Skills Outlook* with a combination of comparative analysis and country studies, will seek to: *i)* review and anticipate the evolution of labour demand together with the factors driving this demand; *ii)* assess to what extent the right mix of skills is being taught and learned so that employers find workers with the skills they need; *iii)* examine equitable and efficient approaches to developing skills, that also establish who should pay for what; and *iv)* assist countries to deploy their talent pool effectively, including existing skills currently outside the

29. Many international organisations are giving increasing attention to vocational education and training – UNESCO, in particular, has launched a new and expanded programme of work in this area. *Skills Beyond School* will take systematic account of the wide range of work being undertaken in other international organisations and agencies. Co-ordination of VET work between international organizations will be ensured not only through ad hoc bilateral discussions, but also more systematically through the Inter-Agency Working Group on VET, initially convened by UNESCO and involving, at recent meetings, representatives of the World Bank, the European Commission, the European Training Foundation and the ILO. The group meets a few times a year to explore matters of common interest and share experience.

**Proposed outputs**

30. This review will involve three types of output – *comparative analysis*, looking at postsecondary VET across all OECD countries, *country studies* involving country reviews and other work addressed to individual participating countries and a *final
Comparative policy report drawing together policy lessons from country experiences.

Comparative analysis
31. The comparative analysis will involve several elements:
   • An initial mapping exercise covering the provision of postsecondary VET and the issues arising. This will include descriptive country profiles describing provision in a sample set of countries and a special study of Korea undertaken by the Korean Research Institute on VET (KRIVET). This exercise is being supported through an OECD-Korea (KRIVET) collaborative exercise and a voluntary contribution generously provided by Korea (see Box 2).
   • Development of postsecondary VET indicators including:
     – A stock-take of existing internationally comparable main postsecondary VET indicators, based on the Education at a Glance database and available labour market statistics.
     – Assessment of the scope for further analysis of the international data; development of more relevant international indicators, in collaboration with OECD colleagues responsible for education indicators; and using national data as case studies to illustrate broader themes in the international study.
     – Background/analytical reports and/or working papers on key policy questions in Postsecondary VET.
     – A review of trends in demand for skills provided by postsecondary VET, if funding is provided as part of the OECD Skills Strategy.

Box 2. The OECD-KRIVET study
Korea, through KRIVET has generously provided a voluntary contribution to the OECD to allow preliminary work on postsecondary VET to be carried out in 2010 in close collaboration with KRIVET. The OECD-KRIVET study of post-secondary education will contain three components:
   • Description of postsecondary VET systems in a sample set of OECD countries according to an agreed template. Draft summaries of each country system will be submitted to each country for verification.
   • Discussion of key policy issues and questions facing postsecondary VET.
   • A special survey of the issues facing Korea in the field of postsecondary VET, prepared by KRIVET researchers.
Some outcomes from the OECD-KRIVET study will be presented and discussed at an OECD-KRIVET international seminar to be held in Paris on the afternoon of 17 November. All OECD countries and regular observers of the OECD’s Education Policy Committee along with the Group of National Experts on VET will be invited to participate in this event.

Country studies
32. The country studies outputs include two elements: Country Background Reports and Commentaries, and Country Reviews.
Country Background Reports and Commentaries

33. All OECD and regular observer countries will be invited to prepare a country background report following agreed guidelines. The aim of these reports will be to provide key data to underpin the international review. It should also provide each country with the opportunity to undertake an initial self assessment to highlight policy challenges. It should contain:

- A succinct description of the postsecondary VET system. The aim would be to avoid unnecessary duplication of existing material in English or French. So the background report might include a sequence of links and references to such material, if it adequately covers the ground.
- An assessment of strengths, challenges and policy priorities. These could also include examples of particular innovations and practices which are of wider international interest.
- Statistical data and research evidence bearing on the performance of the system.

34. A short published OECD commentary on the background report can be prepared for countries that choose not to opt for a full country review (but contribute to the financial baseline). These would involve a short visit to the country by the OECD Secretariat to explore the issues described in the country background report and provide the basis for the OECD commentary. The commentary would place the country’s postsecondary VET system as described in the country background report in a broader international context. It would not provide policy recommendations.

Country reviews

35. Country reviews are at the heart of the activity and are designed to provide major benefits to participating countries. They offer countries the opportunity to obtain OECD policy advice, tailored to their particular needs, drawing on a wide range of international experience and high quality analysis. The advice is developed in partnership between the OECD Secretariat and the country. In some federal countries, it may make sense to conduct a review for one or more regions, states or provinces rather than at country level.

36. Country reviews also serve the wider objectives of the exercise, allowing effective policies and practices in reviewed countries to be shared with other countries, and providing the foundation of concrete experience to ensure that the policy advice in the final OECD comparative report is not only analytically solid, but also practically realistic and sensitive to the diverse circumstances of individual countries.

* This seminar is scheduled to take place the day before the Education Policy Committee meeting.

39 This may build on any description of the system prepared by the OECD as part of the initial mapping exercise.
37. The focus of each review will be determined by the country in consultation with the Secretariat. Country reviews will involve two visits to the country by an OECD team followed by delivery of a draft review to the country on a strict timetable four months after the second visit. Detailed guidance on the arrangements for the review will be provided to the country and its national co-ordinator by the Secretariat.

**Final comparative report**

38. The final comparative report will draw together the comparative analysis and the country studies to identify general policy messages for OECD countries, illustrated by examples of policy and practice. It will in particular aim to provide a framework for countries to examine their systems of postsecondary VET and identify points of strength, potential weaknesses and potential options for reform. An initial draft will be delivered to countries by the end of the biennium in 2012.

**Practical arrangements**

**Governance**

39. The project will be carried out under the oversight of the Group of National Experts on Vocational Education and Training. The Group of National Experts is open to all OECD member countries and regular observers of the Education Policy Committee. Given different responsibilities, some countries may wish to send different delegates to the Group of National Experts for the post-secondary VET work than those who participated in the Group of National Experts during the work on *Learning for Jobs*.

40. It is proposed that the Group of National Experts would have meetings on a regular cycle throughout the life of the project:

- on January 10 (afternoon) and January 11 (morning) 2011 to launch the project
- in September 2011 to review progress
- in June 2012 to take stock of emerging findings
- in early 2013 for a final conference and launch of the comparative report.

41. As well as providing oversight of the OECD work, the meetings of the Group of National Experts also provide occasions for substantive exchange on matters of common interest between countries, both providing immediate benefits to meeting participants and countries involved and informing the policy thinking of the review. They would also provide a framework in which bilateral contacts and exchanges between countries can be facilitated, encouraging peer-learning. With those ends in mind the meetings will be planned so as to identify policy topics of particular interest for debate and discussion.

**Country participation and financing options**

42. While all countries are part of the Group of National Experts, the outputs are designed around different levels of country participation. All countries will be invited to prepare a country background report. Countries may also opt for a full country review. They may also simply contribute to the financial baseline, and obtain a commentary on their background report. This project has limited funding from the OECD’s general budget (approximately EUR 450 000 over two years), and country-
specific outputs will require voluntary contributions from countries.

43. All countries opting for a country review would be expected to make a baseline voluntary contribution of EUR 28 000, designed to help fund the analytical and cross-country comparative work as well as some country-specific work. The cost to countries for a full country review is EUR 98 000 (comprising the EUR 28 000 baseline contribution, plus EUR 70 000 to cover the costs of the full review). Those countries making a baseline contribution with a background report and commentary would pay EUR 28 000. These figures have been carefully estimated, recognising the current financial pressures on member governments, and have been held to the absolute minimum consistent with the delivery of high quality results. The working assumption for the budget of the project is that eight countries will opt for a full country review, and a further eight countries will make a voluntary contribution of EUR 28 000. In addition, if countries wish to provide voluntary contributions to support further analytic work on postsecondary VET over and above that programmed they are invited to contact the Secretariat. Further budgetary details are at Annex A.

44. The Secretariat is inviting countries to confirm their interest in having a country review (or contributing a background report and requesting a commentary) as soon as possible but in any event no later than 10 February 2011 following the January meeting of the Group of National Experts. At the same time countries are invited to designate an individual national co-ordinator to be the lead point of contact with the Secretariat. Switzerland has already confirmed that it will undertake a full review and a number of other countries have expressed strong interest. In the coming months the Secretariat will be making bilateral contacts with as many countries as possible to ascertain their interest in participating and interested countries are also invited to contact the Secretariat. The aim will be to offer reviews to all countries that wish one, and at the same time encourage the representation of a diverse mix of countries from different parts of the world, reflecting different approaches to postsecondary VET. Countries confirming review participation early will have more choice over the timing of their review.

The Secretariat team

45. The Secretariat team responsible for the review will be led by Simon Field and include several staff who undertook the Learning for Jobs review. It will therefore be in a strong position to build on the experience of the Learning for Jobs exercise and the 17 country reviews involved.

Timetable

46. A provisional timetable is set out in Annex B on the assumption of eight country reviews. If there is demand for more reviews, then the timetable for reviews may be extended. Irrespective of the number of country reviews eventually carried out, a draft comparative report will be made available on OLIS by the end of 2012.

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40 Countries wishing to do so should contact the Secretariat (jennifer.gouby@oecd.org). They will then be asked for a signed commitment letter on a template that will be provided to them.
REFERENCES


ANNEX A. ILLUSTRATIVE BUDGET OVER PROJECT LIFETIME

This budget has been prepared on the assumption of 8 country reviews and an additional 8 country commentaries.

**Budget for each country review**

<table>
<thead>
<tr>
<th>Thousands of Euros</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>contribution to comparative work</td>
<td>16</td>
</tr>
<tr>
<td>direct mission costs (average)</td>
<td>15</td>
</tr>
<tr>
<td>analyst costs for country review (approximately 100 - 110 analyst days)</td>
<td>52</td>
</tr>
<tr>
<td>administrative costs and overhead charges</td>
<td>15</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>98</strong></td>
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</table>

**Budget for each other contributing country (background report and commentary only)**

<table>
<thead>
<tr>
<th>Thousands of Euros</th>
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<tbody>
<tr>
<td>contribution to comparative work</td>
<td>16</td>
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<tr>
<td>direct mission costs for country commentary</td>
<td>3</td>
</tr>
<tr>
<td>analyst costs for country commentary (approximately 10-12 analyst days)</td>
<td>6</td>
</tr>
<tr>
<td>administrative costs and overhead charges</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>28</strong></td>
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**Expenditure on comparative work (including both preparatory work and final report)**

<table>
<thead>
<tr>
<th>Thousands of Euros</th>
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<tr>
<td>analyst costs</td>
<td>450</td>
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<tr>
<td>experts and commissioned papers</td>
<td>100</td>
</tr>
<tr>
<td>direct mission and meeting costs</td>
<td>30</td>
</tr>
<tr>
<td>communications and dissemination</td>
<td>50</td>
</tr>
<tr>
<td>administrative costs and overhead charges</td>
<td>150</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>780</strong></td>
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</table>

**Income available for comparative work**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Korea KRIVET contribution</td>
<td>88</td>
</tr>
<tr>
<td>Country review contributions (8 reviews assumed)</td>
<td>128</td>
</tr>
</tbody>
</table>
ANNEX B. PROVISIONAL TIMETABLE ASSUMING 8 COUNTRY REVIEWS

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Meetings</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010 Q3</td>
<td>5th meeting of the Group of National Experts (GNE), Leipzig</td>
</tr>
<tr>
<td>Q4</td>
<td>Discussion of project proposal at EDPC.</td>
</tr>
<tr>
<td></td>
<td>Half day conference on 17 November to discuss outcome of</td>
</tr>
<tr>
<td></td>
<td>KRIVET-OECD project</td>
</tr>
<tr>
<td>2011 Q1</td>
<td>6th meeting of the GNE</td>
</tr>
<tr>
<td>Q2</td>
<td>7th meeting of the GNE</td>
</tr>
<tr>
<td>Q3</td>
<td>8th meeting of the GNE</td>
</tr>
<tr>
<td>Q4</td>
<td>9th meeting of the GNE</td>
</tr>
<tr>
<td>2012 Q1</td>
<td>Initial draft of the comparative report delivered</td>
</tr>
<tr>
<td>Q2</td>
<td>Final comparative report published</td>
</tr>
<tr>
<td>Q3</td>
<td></td>
</tr>
<tr>
<td>Q4</td>
<td></td>
</tr>
</tbody>
</table>
### A. Interview and Workshop Schedule

#### 1) Interview and workshop on preparatory visit

<table>
<thead>
<tr>
<th>No.</th>
<th>Date</th>
<th>Venue</th>
<th>Participant</th>
<th>Key Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>9/20(Tue)</td>
<td>KRIVET (Conf. Room No. 209)</td>
<td>Dr. Il-gyu KANG <em>(Acting President of KRIVET)</em>, Dr. Hyunghwan KIM (KRIVET), Dr. Kirak KYU (KRIVET), Dr. Sunkyoung OH (KRIVET), Ms. Kyung Hee YOON (RA, KRIVET)</td>
<td>Greeting Discussion on Country Report</td>
</tr>
<tr>
<td>2</td>
<td>9/20(Tue)</td>
<td>KRIVET (Conf. Room No. 209)</td>
<td>Dr. Eon LIM (KRIVET), Dr. Jeung-Yoon CHO (KRIVET), Dr. Young-sun RA (KRIVET), Dr. Seungil NA (Prof. Seoul National Univ.), Dr. Cheonsik WOO(KDI)</td>
<td>Discussion on Post-secondary VET in Korea - Skills and Dev. - Education in Korea - Finance, governance, etc - Labor market need, Qualification and Career Guide</td>
</tr>
<tr>
<td>3</td>
<td>9/21(Wed)</td>
<td>Ministry of Education, Science and Technology(MOEST)</td>
<td>Mr. Bow-eun HWANG <em>(Director, Junior College Division)</em>, Mr. Eung-suk OH <em>(Officer, Junior College Division)</em></td>
<td>Government policy on Junior College - Finance, Governance, Policy Points etc.</td>
</tr>
<tr>
<td>4</td>
<td>9/21(Wed)</td>
<td>Ministry of Education, Science and Technology(MOEST)</td>
<td>Dr. Young Chul KIM <em>(Director General, Lifelong &amp; Vocational Education Bureau)</em>, Mr. Byung Jae SUH <em>(Director, Lifelong Learning Policy Division)</em></td>
<td>Government policy on Lifelong Education - Finance, Governance, Policy Points</td>
</tr>
<tr>
<td>5</td>
<td>9/21(Wed)</td>
<td>Ministry of Employment and Labor (MOEL)</td>
<td>Mr. Min Suk KIM <em>(Director, Skills Development Policy Division)</em>, Ms. A-ra JO <em>(Officer, Skills Development Policy Division)</em></td>
<td>Government policy on Polytechnics or Training - Finance, Governance, Policy Points - Other training Policies</td>
</tr>
<tr>
<td>6</td>
<td>9/22(Thu)</td>
<td>KRIVET (Conf. Room No. 209)</td>
<td>Mr. Jong-Shik BEA <em>(Director of External Cooperation Division, Korean Council for College Education)</em></td>
<td>Junior College - Finance, Governance - Prof, Student recruiting, Job Placement, etc.</td>
</tr>
<tr>
<td>7</td>
<td>9/22(Thu)</td>
<td>KRIVET (Conf. Room No. 209)</td>
<td>Mr. Jin-Ho Whang <em>(Director, Polytechnics)</em>, Mr. Min-Sang Park <em>(Team Leader, Planning Team, Polytechnics)</em>, Mr. Won-Tea Lee <em>(Staff of Polytechnics)</em></td>
<td>Polytechnics - Finance, Governance - Prof, Student Recruiting, Job Placement, etc.</td>
</tr>
<tr>
<td>8</td>
<td>9/22(Thu)</td>
<td>KRIVET (Conf. Room No. 209)</td>
<td>Mr. Moon-suk Choi <em>(Team Leader, Korea Employers Federation)</em></td>
<td>VET &amp; Needs from Employers - Recruiting Practice, Compensation etc.</td>
</tr>
<tr>
<td>9</td>
<td>9/23(Fri)</td>
<td>KRIVET (Conf. Room No. 209)</td>
<td>Mr. Heong-soon Park <em>(Leader of Human Dev., Korea Chamber of Commerce &amp; Industry)</em></td>
<td>VET &amp; Skills need for Workers or Union - Skills needs for Workers - Participation of Union in VET Policy</td>
</tr>
<tr>
<td>10</td>
<td>9/23(Fri)</td>
<td>KRIVET (Conf. Room No. 209)</td>
<td>Mr. Tea-hyeon KIM <em>(Head of Policy Research Institute, Korean Confederation of Trade Unions)</em></td>
<td>VET &amp; Skills need for Workers or Union - Skills needs for Workers - Participation of Union in VET Policy</td>
</tr>
<tr>
<td>11</td>
<td>9/23(Fri)</td>
<td>KRIVET (Conf. Room No. 209)</td>
<td>Researcher Fellows in KRIVET Dr. Cheonsik WOO(KDI) Officers in the Korean Gov. (MOEST and MOEL)</td>
<td>Debrief &amp; Policy Discussion - Discussion on OECD team’s first visit and on preparation for 2nd visit</td>
</tr>
</tbody>
</table>
## 2) Interview and workshop on policy visit

<table>
<thead>
<tr>
<th>No.</th>
<th>Date</th>
<th>Venue</th>
<th>Participant</th>
<th>Key Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10/31 (Mon) 10:00-12:00</td>
<td>KRIVET (Conf. Room No. 203A)</td>
<td>Dr. Hyungman KIM (KRIVET), Dr. Kirak RYU (KRIVET), Dr. Sukyoung OH (KRIVET)</td>
<td>Greeting with a New President of KRIVET, Discussion on Meetings</td>
</tr>
<tr>
<td>2</td>
<td>10/31 (Mon) 14:30-15:15</td>
<td>KRIVET (Conf. Room No. 203A)</td>
<td>Mr. Moon-Joo Cheong (Federation of Korean Trade Unions)</td>
<td>VET &amp; Skills need for Workers or Union, - Skills needs for Workers</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Participation of Union in VET Policy</td>
</tr>
<tr>
<td>3</td>
<td>10/31 (Mon) 15:20-16:05</td>
<td>KRIVET (Conf. Room No. 203A)</td>
<td>Mr. In-ho Jeong (Director, HR Support Division, Korea Federation of Small and Medium Business)</td>
<td>VET &amp; Skills need from employers(SMEs), - Recruiting Practice, Compensation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Demands from field</td>
</tr>
<tr>
<td>4</td>
<td>10/31 (Mon) 16:10-16:55</td>
<td>KRIVET (Conf. Room No. 203A)</td>
<td>Mr. Heong-soon Park (Leader of Human Dev., Korea Chamber of Commerce &amp; Industry)</td>
<td>VET &amp; Needs from Employers - Recruiting Practice, Compensation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>11/01 (Tue) 10:00-12:00</td>
<td>Ministry Of Education, Science and Technology</td>
<td>Mr. Bow-eun HWANG (Director, Junior College Division)</td>
<td>Government Policy on Junior College - Finance, Governance, Policy Points</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mr. Eung-suk OH* (Officer, Junior College Division)</td>
<td>- Other training Policies</td>
</tr>
<tr>
<td>6</td>
<td>11/01 (Tue) 14:30-15:15</td>
<td>KRIVET (Conf. Room No. 203B)</td>
<td>Mr. Jong-Shik BEA (Director of External Cooperation Division, Korean Council for College Education)</td>
<td>Junior College - Finance, Governance, Prof. Student recruiting, Job Placement, etc.</td>
</tr>
<tr>
<td>7</td>
<td>11/01 (Tue) 15:20-16:05</td>
<td>KRIVET (Conf. Room No. 203B)</td>
<td>Mr. Jin-Ho Whang (Director, Polytechnics)</td>
<td>Polytechnics - Finance, Governance, Prof. Student Recruiting, Job Placement, etc.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mr. Min-Sang Park (Team Leader, Planning Team, Polytechnics)</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>11/01 (Tue) 16:10-16:55</td>
<td>KRIVET (Conf. Room No. 203B)</td>
<td>Mr. Yong Soo Gil (Auditor, Korea Foundation for the promotion of private school)</td>
<td>Private Schools (Junior College, University) - Governance, Funding</td>
</tr>
<tr>
<td>9</td>
<td>11/02 (Wed) 10:00-12:00</td>
<td>Osan University (Junior College)</td>
<td>Professor, Student</td>
<td>Junior College - Campus Visit and Interviews</td>
</tr>
<tr>
<td>10</td>
<td>11/02 (Wed) 14:30-15:50</td>
<td>Ministry Of Employment and Labor</td>
<td>Mr. Yeong Beom Choi (Deputy Director, Skills Dev. Policy Division)</td>
<td>Government Policy</td>
</tr>
<tr>
<td>11</td>
<td>11/02 (Wed) 16:00-17:00</td>
<td>Ministry of Strategy and Finance</td>
<td>Mr. Jong Wook LEE (Director, Education and Science Budget Division)</td>
<td>Government Policy in Funding on VET</td>
</tr>
<tr>
<td>12</td>
<td>11/04 (Fri) 10:00-10:40</td>
<td>KRIVET (Conf. Room No. 209)</td>
<td>Dr. Jae Hyun Park (Research Fellow, Korean Council for University Education)</td>
<td>University - Vocational Training Needs</td>
</tr>
<tr>
<td>13</td>
<td>11/04 (Fri) 10:50-12:00</td>
<td>KRIVET (Conf. Room No. 209)</td>
<td>Research Fellows in KRIVET</td>
<td>Discussion on Country Report</td>
</tr>
<tr>
<td>14</td>
<td>11/04 (Fri) 14:30-17:00</td>
<td>KRIVET (Conf. Room No. 209)</td>
<td>Research Fellows in KRIVET Officers in the Korean Gov. (MOEST and MOEL)</td>
<td>Debrief &amp; Discussion</td>
</tr>
</tbody>
</table>
B. OECD 전문가 면담 및 워크숍 내용 개요

1. 방문 배경 및 목적

OECD 교육국(Directorate for Education: EDU)의 교육훈련정책과(Initiative Policy: ETP)는 2011 년부터 SBS(Skills beyond School) 프로젝트를 추진 중이며, 이 프로젝트에는 한국을 포함하여 13개국이 참여하고 있음.


SBS 프로젝트는 최근 OECD 국가들이 지속적인 성장 또는 발전을 위하여 Skills 의 중요성을 인식하고 있을 뿐만 아니라 Skills 의 향상을 위한 새로운 도전과 도정의 극복할 전략으로서 정책과 도정을 도출하기 위하여 추진되었음. OECD 전문가의 국가별 방문 목적은 OECD 의 SBS 프로젝트에 참여하고 있는 국가의 Country Report 의 검토 및 협의, 각국의 이해 관계자 면담, 그리고 최종 종합보고서 작성의 근거를 마련하기 위한 것임.

2. OECD SBS 프로젝트의 주요 추진 내용

동 프로젝트의 주요 내용은 중등 이후 단계 직업교육훈련(post-secondary vocational education and training)의 기관과 프로그램에 초점을 맞추고 있으며, 한국의 경우 전문대학과 플러틱이 핵심이며, 재직근로자 훈련(또는 학습), 평생교육 등의 영역도 부분적으로 포함됨.

또한 프로젝트는 Post-secondary VET 에 있어서 직업능력개발(Skills development)과 관련하여 노동시장의 요구, 재정, 거버넌스, 자격, 진로가이드, 직업교육훈련의 질 보장 (quality assurance) 등의 관점들을 다루게 될 것이며, 동시에 이들 직업교육훈련이 경제성장 또는 발전을 위해 직면한 문제점을 도출하고 도전을 극복할 거시적 관점의 새로운 방향도 제시할 것이다.

한국에 대한 Country Report 는 위의 주요 프로젝트 내용에 대하여 KRIVET 의 연구진에 의해 작성될 것이며, 전문가 의견을 수렴하여 보완한 다음 최종
보고서로 완성될 것이며. OECD 전문가들은 Country Report를 참조하고 아울러 한국의 정책 권고를 도출하기 위하여 두 차례 방문할 것이며. 최종적으로 한국의 Country Report와 두 차례 방문 조사 결과를 바탕으로 종합보고서를 완성할 것입니다.

Country Report에 포함될 주요 내용:

3. OECD 팀의 한국 방문
- 예비 방문(preparatory visit): 2011년 9월 20일~23일 (세부 일정은 아래 별첨 1 참조)
예비 방문은 정책권고 도출을 위한 기초 조사를 위한 1차 방문으로 정책권고 도출을 위한 2차 방문을 위하여 사용할 질문지 작성 등을 준비하는 단계임. 예비 방문에서는 고용노동부, 교육과학기술부, 기획재정부 등 정부부처 관계자와 경총, 삼공회의소, 노동단체, 교육훈련기관 등 이해당사자와의 미팅을 통해 직업교육훈련의 현황 파악하고, 한국의 Post-secondary VET와 관련하여 숙련 형성과 노동시장의 숙련 요구 등에 대한 초기 탐색
- 최종 방문(policy visit): 2011년 10월 31일~11월 4일 예정
예비 방문에서 조사한 결과를 바탕으로 디자인된 세부적인 질문지를 만들고, 이를 근거로 심도 있는 인터뷰를 진행하여 정책 권고를 위한 기초 정보 수집

- OECD 방문자
  Simon Field (Senior Analyst, OECD, Directorate for Education (EDU), Education and Training Policy Division (ETP))
  Viktoria Kis (Analyst, OECD EDU/ EPT)
  Eunah Park (Consultant, OECD EDU / EPT)

4. 프로젝트 담당자
- OECD 측 Project Manager
  Simon Field (Senior Analyst, OECD EDU / EPT)
- 한국 측 Project Manager
  김형만 박사 (한국산업능력개발원, 선임연구위원)
C. Policy questions to be addressed

To deliver relevant and constructive policy advice, the review will be designed to address the most pressing policy concerns of countries, both in the comparative analysis and individually in the country reviews. These will be identified in dialogue with countries. In the first instance, some suggested policy question grouped around four themes are set out below, drawing on the analysis of VET in Learning for Jobs, of Tertiary Education for the Knowledge Society, and other OECD activities.

"Effective institutional frameworks, funding and governance"

Countries use a variety of institutional arrangements for post-secondary education and with a general trend towards greater autonomy for education institutions, the range of offerings is becoming more complex and dynamic. Vocational preparation in post-secondary programmes may be offered at dedicated vocational institutions, within regular universities, or in multi-purpose institutions. Some countries provide a unified governance, funding and strategic oversight framework while others have distinct approaches for each type of institution.

The cost drivers in provision are not always well understood, and when funding is tightly regulated there may not be sufficient incentives for countries to innovate, or seek out more cost-effective means of delivering their programmes.

Different forms of vocational and academic post-secondary education are often poorly articulated. Transfers across institutions and between different study programmes at the same level are often made difficult and transition to a higher level (e.g. from a VET diploma to a university degree) may be difficult or impossible.

Question:

- How can institutional frameworks, funding and governance arrangements be designed to:
  - Encourage the appropriate and efficient balance between post-secondary VET and academic programmes?
  - Ensure that providers respond to labour market needs?
  - Offer adequate incentives for innovation and efficient provision of programmes?

- Which tools (e.g. qualification frameworks, articulation agreements, recognition of prior learning) are most effective in facilitating sideways and upwards mobility within post-secondary education?
A better match of supply and demand for skills

Getting a good match of supply and demand for skills requires both an effective flow of information and the ability to respond to it. The demand factors include changing skill requirements within jobs – often driven by technology; increased demand for certain existing occupations (e.g. health sector workers as the population ages); and new types of jobs, driven by innovation in products in products and services or by societal demands (e.g. for greener growth).

High quality information is needed about shifting patterns of occupational demand and the labour market outcomes of different study programmes at different institutions. Supported by strong career guidance to interpret such information in relation to the needs and concerns of individual students, this should allow students to make better-informed choices when they invest in future education and make career choice.

Post-secondary VET providers need to be able to adjust their programmes quickly and flexibly in response to shifts in demand. This requires autonomy but also a thorough understanding of labour market developments, linkages with employers and the capacity to manage student demand for places with longer-term and strategic decision-making. Effective career guidance can also help to match the mix of provision to labour market needs, by encourage students to invest in relevant skills.

As well as requiring technical skills, employers are often concerned about the job-readiness of post-secondary graduates. Close relationships between providers and employers can help strengthen providers’ understanding of job-readiness skills and facilitate the work placements that offer a strong learning environment and facilitate transition to employment. But employers may be too distant for effective communication and many VET programmes lock the substantial, good quality workplace learning necessary to build effective workplace skills.

Questions:

- What steering mechanisms are most effective in reconciling student preference and employer needs?
- How can career guidance services be developed to assist both individual students in their career plans and study choices, and help to meet labour market needs?
- How can providers become more responsive to labour market needs both in the mix of programmes they offer and in the content of each programme?
- What are the most effective ways to blend programmes and workplace learning to strengthen job-readiness skills?
- What are the most effective channels for getting employers and trade unions effectively engaged with the post-secondary VET system?

Better quality in post-secondary VET

VET programmes to offer high quality teaching and learning and produce graduates with a clear set of competencies. Many of the proxies used to assess quality in universities, such as publication rates, ability to compete for research funding and academic qualifications of faculty, are even less relevant to VET programmes and measuring the quality of vocational teaching is challenging. The quality of VET programmes needs to be verified whether through internal and external review, or other means.
Teachers and trainers are the key to quality in post-secondary VET as in general education. They need a career structure designed to help them develop an appropriate mix pedagogical skills, academic knowledge and up-to-date industry experience.

Making quality transparent is a first step. The next step is to provide incentives for quality improvement. Often this will be through well-informed students choosing better institutions. But local monopolies in provision abound, and many students may find it difficult to move residence to study.

Questions:
- Which quality assurance tools are best adapted to vocational programmes, to support quality improvement and underpin accountability?
- How can career management arrangements for post-secondary VET teachers and trainers ensure that they have the right mix of skills, including relevant industry experience?
- How can funding and governance arrangements provide sufficient incentives for improvements in the quality of post-secondary vocational programmes?

<Equity, access and completion>
Alongside the need to provide skills for the labour market, post-secondary VET in many countries often aims to provide education opportunities for these less academically inclined, non-traditional students and these wishing to pursue a new career as adults. Meeting multiple objectives and expectations may present particular challenges to VET providers. At the same time, many entrants lack information on post-secondary studies: drop-out rates are often high.

Many post-secondary vocational students come from disadvantaged backgrounds and they do not always have access to the same sources of financial support as their peers in more academic programmes. Differences in access to public funding reflect sometimes historical factors and insufficient policy responses to the expansion of a new post-secondary sector, rather than a rationale based on some principles.

Questions:
- How can selection criteria, student support and guidance ensure flexible pathways of entry, while maximizing successful completion?
- How can common principle be developed to underpin the funding of post-secondary education and ensure that resources are distributed across providers and students in ways that promote equity and efficiency?
C. Interview Minutes

1. Preparatory Visit: 20-23, September 2011

1) 20 September 2011

Mr. Simon FIELD, senior analyst in the OECD, introduced this visit for ‘Skills beyond School’ project undertaken at the OECD countries aiming to find out the challenges and issues on current vocational education and training (VET) system and to provide policy recommendations.

Attendees discussed overall facts on labor market and education in Korea
- 57% of junior college graduates go to labor market after graduation.
- Premium on salary after graduation based on degree and school’s reputation exists.
- The Korean government regulates and restructures poorly performing junior colleges.
- Linkage between labor market and education system is not solid.
- In many cases, a choice leading students to go to junior colleges comes from their low academic performance rather than their motivation to develop their professional skills.
- Wage gap between high school graduates, junior college graduates, 4 yr university graduates are 100: 103: 154

Mr. Simon FIELD raised a question about a scope of VET in Korea

Mr. Cheonsik WOO, senior analyst at KDI, answered that scope excludes academic-oriented education and includes industrial and commercial training. Programs or qualifications, in particular for specific jobs and careers are defined as VET.

Prof. Seungil Na, of Seoul National University, gave a short overview on VET in Korea.
- Negative image of vocational education interrupts for student to choose VET programs in Korea.
- We should manage a lack of adequate communication between demand and supply.
- Demands from industries are focused on general competences of students rather than specific job skills.
- Small and Medium sized Enterprises (SMEs) can’t afford costs from VET thus they need external supports to train employees.

2) 21 September 2011

Mr. Bo- Eun Hwang, Director of Junior College Division at Ministry Of Education, Science and Technology (MOEST), stated about what are the biggest challenges in policy makings regarding junior college’s education.
Restructuring
In comparison with school-age population’s decline, 146 junior colleges are excessive. In general we can’t say their quality of education is high enough.

Overcoming mismatch between education and labor market
Quality assurance and increase quality of education in junior colleges at least to minimum criteria
Fostering government’s financial support

Mr. Simon FIELD put a question: How we can overcome the mismatch between education and labor market?

Mr. Hwang answered with followings.
- More academic-industrial cooperation is required
- Employers’ roles in junior colleges should be enhanced.
- Alternatives: designing contract-based curriculum with companies, locating campus within an industrial complex

Mr. Simon FIELD raised a question about low drop-out rate in Korea.
Mr. Hwang answered tuition is mainly paid by household in Korea and culturally people believe student should complete educational programs despite any difficulties. Furthermore schools have a duty to educate students and enable students graduate successfully. That leads to low drop-out rate.

2. The Policy Visit: 31 October - 4 November 2011

1) 31 October 2011

Mr. Simon FIELD presented advantages and challenges based on findings from his preparatory visit.

Advantaged of VET in Korea
- Koreans set a high value on Education
- Korean students are well educated in regard to basic learning skills (ex. PISA’)
- Access route in education is explicitly clear
- Low drop-out rate

Mr. Hyung Man KIM, Senior Research Fellow at KRIVET, added that low drop-out rate has two attributes: quality assurance and rate of completion in a course. Low drop-out leads low social cost incurred by students’ drop-out. Since in Korea, people value completion of educational courses, perceiving drop-out negatively. In addition, competitive selection of students is completed at recruiting stage.

- Policy makers strive to respond to current challenges
- Data infrastructure for research is in good condition

Challenges of VET in Korea
- Skills and qualification are not recognized in compensation. Seniority and
academic degree are more imperative than skills and qualification
- Quality assurance by institutions should be consolidated
- Junior college’s missions are not clear and they look like to be 4 year universities.
- Lack of coordination between actual competencies and national standard. Students need to prepare to pass the national exam to be qualified after competing educational courses.
- Involvement of employers along with unions in policy making is more required
- Implementing of policy by government is challenging. Government has a few policy means to regulate educational institutions mostly private.

Mr. Hyung Man KIM noted that even if unemployment rate remains high in labor market, a wage has not declined. It means 4 year university graduates are not replaced by junior college graduates. Engagement of Trade union and inflexible job market lead to this situation. Job market split into two parts. One is highly affected by large employers the other is influenced by SMEs. Large employers provide secured jobs. On the other hand, SME offers relatively insecure employment. Big difference in wage exists between two parts. In the Korean labor market, companies have tendency to hire people based on candidates’ seniority rather than qualification or skills. In fact, in making policy, this is not easy to how overcome this problem. National Competency Standard (NCS), however, may solve the problem.

In junior colleges, they are not capable to adapt the necessary skill level of labor market by themselves. Also, government has to take more initiative to bridge between labor market especially on SME and workforce supply. When a government develops NCS, trade unions and employers should participate in. More priority has to be given for SME.

Mr. Chung Moon-Ju, director of Policy Bureau at the Federation of Korean Trade, highlighted necessity of paid leave of absence for learning. Trade unions hope to execute VET project themselves. In order to reduce the gap between large employers and SMEs for VET, public VET program has to be consolidated. Enabling many stakeholders of VET such as trade union to participate in VET policies is imperative.

He stated despite willingness of trade unions to participate in VET project themselves, they lack sufficient infrastructure to execute VET. Trade unions are aiming for developing the specialty and specialized project goal in VET projects. Korea Employers Federation and Korean trade union has founded ‘Korea Labor Foundation’ and by this organization, trade unions are likely to join VET projects. Once founded, it had been funded by MOEL, now funded by regional governments thus some programs have challenges to carry on the projects in regional areas.

Mr. Heung-soon Park, director general of HRD division at the Korean Chamber of Commerce and Industry, noted that one governmental body under the supervisions of prime minister has the initiative in managing all the national frameworks on VET. In a consortium on VET by government, Korea Chamber of Commerce & Industry takes part in it. The government is willing to let Korea Chamber of Commerce & Industry participate in policy making. On the other hand, qualifications that students acquired while studying, is not appreciated rather skills acquired from actual work. Since actual tasks and qualifications are
different from what students know in many cases. Therefore a system which industries’
experienced employees train workforces then certify the level is recommended.

2) 1 November 2011

Mr. Jin-Ho Whang, Director at Polytechnics, introduced that Polytechnics are promptly
responding to the needs of labor market. Polytechnics emphasize workplace training system,
having well-established framework. Its program is customized and new technology is
quickly adopted in a program.

Mr. Yong Soo Gil, auditor at the Korea Foundation for the promotion of Private school, put
emphasis on efforts of junior colleges to innovate themselves and to improve their
educational quality. Outsourced consulting and their internal committee can be helpful.

3) 2 November 2011

Mr. Yoo Hyun, chief of planning Division in Osan Junior Colleges, stated when students
work in companies, doing internships, their assigned simple woks are not compatible with
what students have learned at school, it leads to de-motivation for students. For employers,
they are reluctant to hire interns since trainees don’t have professional experiences
comparing training cost. Osan Junior College graduates are hired normally in SMEs, co-
operating with SMEs in many projects.

Mr. Choi, Yeong Beom, deputy director of Skills Development Policy Division in MOEL,
introduced that Korea Skill Standard and National Occupation Standard were merged into
National Competency Standard (NCS). The Korean government attempts to reflect voice of
employers and industries. On top of that, it aims to launch completion-based qualification
in 2012. However more discussion on it, enabling to decide which programs should be
executed within completion-based qualification and which criteria are required.

Mr. Lee, Jong Wook, Assistant Director of Education & Science Budget Division in the
Ministry of Strategy and Finance, noted that restructuring junior colleges and 4 year
universities are necessary. Bottom 30% of poorly performing educational institutions is
subject to closing. Finally the Korean government aims to restructure bottom 15% (total 43
institutions). In regard of reducing social cost stemmed from mismatch between supply and
demand, percentage of the advancement to higher education institutions such as university
could be decreased. Government’s financial support is going to be focused on co-operation
between educational institution and industry, educational institutions at local areas, job
trainings and life-long learning.

4) 4 November 2011

Mr. Jae Hyun Park, researcher of department of policy research in the Korean Council for
University Education, explained about employers’ participant in managing universities.
Certain universities are owned by conglomerates thus CEO is in charge of management of
university. In that case, employers aim for more company-oriented curriculum or to
restructure departments according to companies’ vision. Otherwise an employer joins a university through cooperation between industry and university. Companies may offer research fund, scholarship and educational facilities, which lead to develop their future workforce. When it comes to quality assurance, the information service of higher education in Korea exists. All junior colleges and 4 year universities are obliged to release certain indicators in regard of their educational quality. The act for this service was instituted in 2008 and the Korean Council for University Education has all responsibilities.

Mr. Jae Hyun Park pointed out what needed for 4-university to lead vocational training.

- Fostering basic professional competency based on certification system which deals competencies commonly required in workplace.
- Developing new teaching system to link with professional training even in teaching major subjects.
- Providing more opportunities for internships. From the beginning, universities may provide internship opportunities enabling students to have hands-on works experiences.
- Supporting engineering studies

Ms. Hu, Yoon Sun, deputy director of Skills Development Policy Division of MOEL, noted the Korean government has been taking all the initiatives on VET and now it tries to invite industries. She noted the government is in need of supporting SMEs’ Human resource training. SMEs are not capable to afford and access to sufficient information. Furthermore speaking of internship, the government requires offering a guideline to assist both employers and trainees. Completion-based qualification faces challenges from those who have already acquired qualification by exams. They oppose the completion-based qualification system because they perceive through completion-based qualification system that qualification may be given easily comparing their hard work to pass the qualification exams.

Ms. Hu highlighted that management of junior colleges and universities should be left with autonomy. However, their curriculum should be aligned with NCS. In enabling workplace training, using financial lever such as grant can be effective.

In discussing HRD issues within one single body, we could come up with discussion within Economic Social Development Commission which is already established and has dealt with overall Human Resource Policies of Korea. Now it focuses on working condition and wages but it may includes HRD and VET issues.