



The Right Skills for the Job:

A Case study of Labor Supply and Demand in
Special Economic Zones in Cambodia and Laos



Phornphan Srikhatthanaprom and Benjamin Harkins
September 2012

Supported by the New Zealand Aid Programme



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We hope that this report and recommendations on vocational training for skilled employment will be useful in strengthening a more evidence-based approach to skills development and create a closer correlation between the demand and supply for vocational skills, offer increased opportunities for decent work, and support the sustainable social and economic development of the Greater Mekong Subregion.

This report was completed by staff members at the Mekong Institute in Khon Kaen, Thailand. The opinions expressed therein are those of the Mekong Institute research team alone and do not necessarily reflect the views of the New Zealand Aid Programme.

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LIST OF ACRONYMS AND ABBREVIATION

- ADB:** Asian Development Bank
- AEC:** ASEAN Economic Community
- CLMV:** Cambodia, Laos, Myanmar, and Vietnam
- CSEZB:** Cambodian Special Economic Zones Board
- DWCP:** ILO Decent Work Country Programme
- EWEC:** East-West Economic Corridor
- Lao PDR:** Lao People's Democratic Republic
- GMAC:** Garment Manufacturing Association of Cambodia
- GMS:** Greater Mekong Subregion
- ha:** Hectare
- HRD:** Human Resource Development
- IBRD:** International Bank of Reconstruction and Development
- ILO:** International Labour Organization
- JBIC:** Japan Bank for International Cooperation
- KOICA:** Korean International Cooperation Agency
- MoE:** Ministry of Education
- MoLSW:** Ministry of Labour and Social Welfare
- MoLVT:** Ministry of Labor and Vocational Training
- MoU:** Memorandum of Understanding
- NCVER:** National Centre for Vocational Education Research
- NEA:** National Employment Agency
- NPIC:** National Polytechnic Institute of Cambodia
- NQF:** National Qualification Framework
- NTB:** National Training Board
- NTTI:** National Technical Training Institute

PPI: Preah Kossonmak Polytechnic Institute

PrEA: Private Employment Agency

QIP: Qualified Investment Project

RQF: Regional Qualification Framework

RSP: ILO Regional Skills Programme

SEC: Southern Economic Corridor

SEZ: Special Economic Zone

SEZA: Savan-SENO Special Economic Zone Authority

SEAMEO: Southeast Asian Ministers of Education Organization

SKILLS-AP: ILO Regional Skills and Employability Programme in Asia and Pacific

SVTS: Savannakhet Vocational and Technical School

TVET: Technical and Vocational Education and Training

UNDP: United Nations Development Programme

UNESCO: United Nations Educational, Scientific and Cultural Organization

USAID: U.S. Agency for International Development

VAT: Value Added Tax

VOCTECH: Regional Centre for Vocational and Technical Education and Training

WGICSD: Working Group for International Cooperation in Skills Development

XTC: Xaysombath Technology College

EXECUTIVE SUMMARY

A lingering stumbling block to expanding economic growth in the Greater Mekong Sub region (GMS) is the lack of sufficient skilled and semi-skilled labor to meet the demands of industrial development. Cambodia, Laos, Myanmar and Vietnam (CLMV) are poised to become production bases for labor intensive firms, as labor costs have begun to rise in traditional outsourcing sites of multinational companies such as in China and Thailand. CLMV countries are attracting an increasing number of foreign companies to invest in industrial parks and special economic zones (SEZs).

Further expansion of these investments has been identified as a priority area in the respective national socio-economic development plans of these many countries. Identifying the deficiencies and mismatches in workforce skills to provide for the labor demand of these new production bases, and how they can be overcome, has become a highly relevant topic for further empirical research in the GMS.

While policy, programmatic and institutional reforms have successfully raised the general level of education for the workforce in many GMS countries, multiple studies found that there remain significant mismatches and scarcities in the availability of the skilled workers required at the region's industrial production bases.

Mekong Institute conducted a study in the Phnom Penh and Savan-SENO SEZs (PPSEZ and SSEZ) of Cambodia and Lao PDR respectively to contribute to evidence-based responses to issues around skilled labor supply and demand in the GMS. The primary objectives of this study were to determine the demand for skilled workers by companies located in these two SEZs, assess and project the availability of those skills in the current and future labor market, and evaluate the capacity of Technical and Vocational Education and Training (TVET) institutions in each country to supply workers with the skills necessary to fill these labor market demands.

Research Findings

The field research revealed that the quantitative gap between demand and supply in skilled labor in the SSEZ in Lao PDR was relatively minor as yet. Companies operating in the SSEZ reportedly required a total of 1,989 workers and on the other hand, local vocational schools in Savannakhet province will be graduating 1,734 students in 2012.

A more meaningful comparison was found in the breakdown by occupational skills, which appear to indicate that mismatches in supply and demand do exist for certain specific skill areas such as IT/computer operators, maintenance mechanics, welders, sewers/dressmakers, gem lapicides, and others. Another important concern was the labor market's capacity to support the future growth of the SSEZ.

As the TVET system in the Savannakhet area already appears to be straining to keep up with the demand for skilled labor, it is unclear how it will be able to meet these needs when the SSEZ reaches full operational capacity during the next 10 years, requiring a total of 5,000 workers. This suggests that a much wider gap between the supply and demand for skilled labor could potentially emerge, threatening the SSEZ's ability to expand to meet its objectives of job creation and improvement of living standards.

Five main causal factors were found for the skills mismatch in the SSEZ:

1. Lack of interest in vocational skills training
2. Preference for studying business management and accounting subjects
3. Low incentives offered for work in the SSEZ
4. Unavailability of accurate labor market information
5. Insufficient quality and relevance of TVET

The estimated total number of workers needed by the companies currently in operation within the PPSEZ in Cambodia was found to be 14,243. With a current workforce of 6,700 employees in the zone, a labor gap of 7,543 workers exists. When considered against the training output of the three largest TVET institutions in Phnom Penh, which are able to produce nearly 3,000 graduates annually, the figures suggest that mobilizing this number of workers will present a daunting challenge for the expansion of industrial development in the PPSEZ. Moreover, according to representatives of the PPSEZ and JETRO, a significant amount of additional Japanese investment in the Zone is anticipated in the next few years. By 2015, the PPSEZ as a whole is expecting to employ approximately 100,000 workers.

The research identified six key causal factors for the mismatch of labor supply and demand in the PPSEZ:

1. Increased competition for labor resources
2. Preference for studying academic subjects at universities
3. Low incentives offered for entry-level work in the PPSEZ
4. Increased expectations for skilled workers
5. Unavailability of accurate labor market information
6. Insufficient quality and relevance of TVET

Conclusion

While interventions to build the human resource capacities and infrastructure of TVET institutions appear to be a clearly indicated need for progress on skills development in both Laos and Cambodia, many of the problems that exist with TVET systems in these countries were the result of a top-down approach to their design and management and a lack of responsiveness to needs of the stakeholders involved. Therefore, an inclusive approach to TVET reform that is based upon broad consultation with government, private sector and worker/student representatives and improved labor market information is an imperative for further development of the system. Establishing TVET systems that are appropriate and responsive to the current developmental stages of GMS countries and the needs of industry, as well as progress on instituting subregional skill standards, will both require a more evidence-based and participatory policy discourse on skills development.

CHAPTER 1

RESEARCH APPROACH

1.1 Introduction

The Greater Mekong Subregion (GMS), consisting of Cambodia, Yunnan Province and Guangxi Zhuang Autonomous Region of the People's Republic of China, Laos, Myanmar, Thailand, and Viet Nam, forms a dynamic area of economic growth within the heart of mainland South East Asia. The subregional grouping, formed in 1992 under the auspices of an Asian Development Bank (ADB) program, binds the countries of the Mekong River basin, an area covering 2.6 million square kilometers with a combined population of approximately 326 million. (ADB, 2012a)

A return to relative political stability following the end of the Indochina War has provided a supportive context for sustained economic and social development in the region. This process of transition and transformation has given rise to increasing economic modernization and industrialization as GMS countries gradually shift from subsistence farming to more diversified and globalized economies. In parallel with these developments is the increasing economic integration of the six countries, particularly in terms of intra-regional trade, investment and labor migration.

Coupled with this progress over the last several decades in developing economic infrastructure and fostering political stability, the abundant human and natural resources of the GMS provide the impetus for its being one of the fastest growing economic regions in the world. The overall regional demographics of a young and expanding working-age labor force, as well as rich endowments of natural and energy resources, supply the GMS with structural advantages that could sustain the growth trajectory of the economies of the region and alleviate the incidence and severity of poverty that remain in many areas.

However, a lingering stumbling block to this vision of expanded economic growth and prosperity for the region is the lack of sufficient skilled and semi-skilled labor to meet the demands of industrial development in the GMS. (Athukorala, Manning, & Wichramasekara, 2000, pp. 39, 77) While educational reforms have been raising the general level of education for the workforce in many GMS countries, multiple studies have found that there remain significant mismatches and scarcities in the availability of the skilled workers required at the region's industrial production bases. (Mishra, 2010)

An increase in the skilled and semi-skilled workforce can be identified throughout the region. However, the challenges and needs for skills development are by no means uniform across the GMS. Although Cambodia's economy is still dependent upon a large agricultural sector, the composition of employment over the last few decades has been rapidly changing. The workforce engaged in agricultural employment declined from 64% in 2001 to 51% seven years later. (World Bank, 2010, pp. 19-20) Most of this occupational

shift has been directed towards the service and industrial sectors and has led to a swift and dramatic transformation in the skills requirements of the labor market.

This has left the existing Technical and Vocational Education and Training (TVET) systems in Cambodia struggling to keep pace. According to a study commissioned by the World Bank, 54% of employers claimed that there is a mismatch between the skills offered by vocational training institutions and the requirements of their firms. (World Bank, 2010) The increasing demand for workers with a “*mix of good soft and technical skills*” by employers is largely unmet, making balancing the training output of TVET institutions with the demands of industry a crucial challenge for Cambodia’s future economic development. (World Bank, 2010, p. 21).

The scarcity of adequately skilled labor to fulfill the demands of industry within Lao PDR is perhaps even more significant, where the average level of education completed is four years. As a result, few young people leave school with the skill set required to be competitive or productive in an increasingly globalized labor market. This undermines national efforts to eliminate poverty, raise living standards, and boost the country’s productivity and competitiveness. The poor quality and low enrollment figures of TVET institutions exacerbate the already low levels of general education. In 2007/8, less than 16,000 students enrolled in TVET programs, only a third of which were women. (ILO, 2011b) According to the ILO, few of these programs provide adequate preparation for higher skilled technical and managerial positions in the private sector. Despite the fact that the current stage of development in Lao PDR requires more graduates from TVET institutions than it does university graduates, recent TVET enrollment rates are in decline. (ILO, 2011b)

Figures showing impressive increases in the number of workers with bachelor’s degrees from institutions of higher learning in GMS countries may also obscure the fact that, in many Mekong countries, improved TVET systems are urgently needed to successfully respond to the skills requirements of economic development at this stage. In Thailand, for example, the number of students obtaining a bachelor’s degree has more than doubled from 1.75 million in 1997 to 4 million in 2010, resulting in an oversupply of university graduates. Consequently, the unemployment rate for workers with this level of education increased from 1.6% in 1997 to 2.5% in 2010. (Chalamwong & Archapiraj, 2011). Thailand has become the major receiving country for migration within the region, currently hosting an estimated migrant worker population of over three million within its borders, the majority of whom are employed as low and semi-skilled workers to fill gaps in the labor market. (ADB, 2009a; Huguët, Chamratrithirong, & Richter, 2011)

Several intractable obstacles must be overcome if TVET is to play a meaningful role in filling the existing labor gaps and in correcting the widening skills mismatch in GMS countries. TVET schools, even for courses offering vocational training for technicians and engineers, are not as popular for qualified applicants as studying in academic disciplines at universities. The high premium placed on academic learning in many Asian countries also explains in part the preference for enrollment in non-vocational courses, as well as the lack of information available to students about the opportunities for career advancement and the

potential to receive attractive salaries for TVET graduates. It has also been noted that a large number of young people in the GMS who may be good candidates for study at TVET institutions drop out of school in order to support the subsistence farming or informal sector businesses of their families. (World Bank, 2010)

At the same time, opportunities are emerging for countries at lower levels of development within the GMS, such as Cambodia, Laos, Myanmar and Vietnam (CLMV) to become production bases for labor intensive firms. As labor costs have begun to rise in China and Thailand, CLMV countries are attracting an increasing number of foreign companies to invest in industrial parks and special economic zones (SEZs). Identifying the deficiencies and mismatches in workforce skills to provide for the labor demand of these new production bases, and how they can be overcome, has thus become a highly relevant topic for further empirical research in the GMS.

Mekong Institute (MI) conducted a study in the Phnom Penh and Savan-SENO SEZs of Cambodia and Lao PDR respectively to contribute to evidence based responses to the issues around labor supply and demand in the GMS economic corridors. The primary objectives of this study were to determine the demand for skilled workers by companies located in these two SEZs, assess and project the availability of those skills in the current and future labor market, and evaluate the capacity of TVET institutions in each country to supply workers with the skills necessary to fill these labor market demands. These results of this study are primarily meant to serve the basis for discussion and deliberation in the MI policy forum and will guide the design of a capacity development package for stakeholders in this sector.

1.2 Research Methodology

This study was conducted between December 2011 and June 2012. Field data collection was undertaken in Laos in December 2011 and in Cambodia in May 2012. The study utilized a mixture of primary and secondary research methods to address the research questions set forth for the project. The specific data collection tools applied during the research included the following:

- **Desk Review:** Review and analysis of relevant documents from both local and English language sources on the supply and demand for skilled labor in the study locations.
- **Key Informant Interview:** Interview of informants at stakeholder organizations and institutions involved with the policy, implementation and operations for training and employment of workers in the SEZs. This included influential leaders and decision-makers from the governmental, educational, and industrial sectors. (A detailed list of organizations interviewed is provided under the Research Sample section and the names and titles of all of the individual informants interviewed are documented in Appendix I of this report). Tailored questionnaires were developed in order to carry out semi-structured interviews with each of the three study target groups
- **Direct Observation:** Touring the physical premises of SEZ sites and TVET institutions to inspect their operations.

A non-positivist approach to data collection was applied during the study. The field data was analyzed utilizing the observer impression interpretive technique and the research results from all sources were triangulated to reach the study's conclusions.

1.3 Research Sites

A survey of feasible and economically significant sites for the field research led to the selection of the following two SEZs for the study:

1. Svan-SENO Special Economic Zone (SSEZ), Lao PDR
2. Phnom Penh Special Economic Zone (PPSEZ), Cambodia

Both sites are hosted by CLMV countries that are emerging as alternative production bases within the GMS. The specific SEZs chosen represent locations of new industrial development within these countries where it was expected that firms would not have reached full staffing capacity.

The decision to conduct the research within SEZs in both countries was made due to the strategic importance placed upon these and similar policy initiatives for facilitating economic growth and development in the majority of GMS countries. Success in training the necessary workforce to meet the skilled labor requirements of firms in the SEZs is therefore an important indicator of the coherence and impact of national skills development strategies in these countries.

1.4 Research Sample

A total of 19 semi-structured interviews were completed with key informants during the field research. These included discussions with company representatives of factories located within the SEZs, the management staff at TVET schools, and officials at the relevant government ministries. These sectors were included in the sampling to facilitate direct comparisons between the demand for vocational skills by firms operating in the SEZs and the vocational training output of schools in the surrounding communities. Key informants were interviewed from the stakeholder organizations and institutions listed in the table below:

Table 1.1: Research Sample

Country	Organization/Institution
Lao PDR	Department of Vocational Skills Development and Employment, Ministry of Labor and Social Welfare
	Developer of Savan-SENO Special Economic Zone
	Savan-SENO Special Economic Zone Authority
	Department for Planning and Investment, Statistics Section
	Xaysombath Private Vocational College
	Savannakhet Vocational and Technical School

Country	Organization/Institution
Cambodia	National Employment Agency
	Director General of TVET
	Ministry of Labor and Vocational Training
	Japan External Trade Organization
	Phnom Penh Special Economic Zone Co., Ltd
	Thai Business Council of Cambodia
	National Technical Training Institute
	National Polytechnic Institute of Cambodia
	Preah Kossamak Polytechnic Institute

1.5 Research Objectives

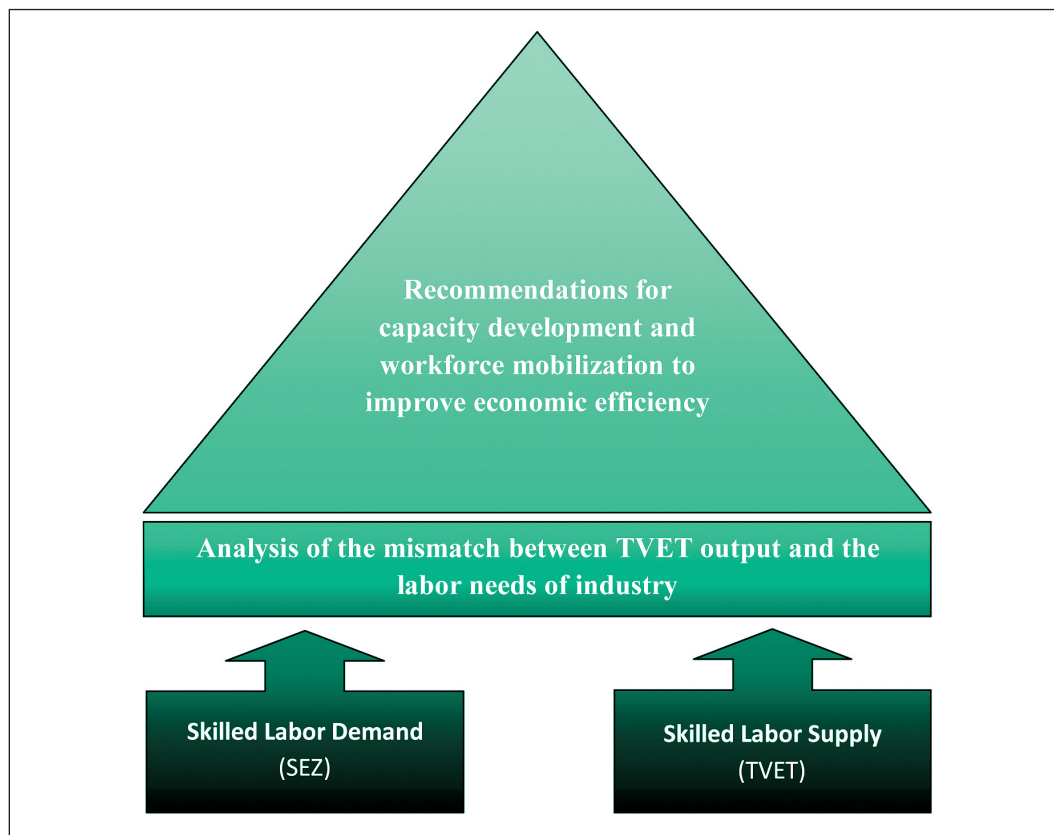
1. Determine the existing and projected skills needs of firms operating in the SEZs
2. Analyze the capabilities and training output of TVET institutions in the surrounding communities vis-à-vis the labor demands of the SEZs
3. Provide recommendations to private sector firms, government authorities, and TVET institutions on the capacity development and workforce mobilization measures that will ensure a better match between labor supply and demand
4. Identify areas for further empirical research on the skills development needs for meeting labor market demands in CLMV countries

1.6 Research Questions

1. What type and level of vocational skills are needed by companies operating in the SEZs in Cambodia and Lao PDR?
2. What are the capacities of TVET institutions near the SEZs to supply workers with the skills required to meet industrial demand? What are the priority areas for further capacity development?
3. What are the key obstacles to achieving a match between labor supply and demand in the SEZs and what measures can be implemented to overcome them?
4. Who are the key actors and what are the most important initiatives for skills development policy and programming at national and regional levels in Cambodia and Laos?
5. Is there any standardization of vocational school curriculums offered by TVET institutions at the national or regional level?
6. What partnerships and/or collaborations exist between TVET institutions and firms operating in the SEZs?

1.7 Research Framework

Figure 1.1: Research Framework



The framework for the study was to collect data on the skilled labor demands of companies in the SEZs and the supply of skilled labor by TVET institutions in order to generate a quantitative and qualitative analysis of the mismatch in training output versus industry skilled labor requirements. This data analysis was used as the evidence base for proposing recommendations and intervention strategies to the relevant government authorities, private sector companies, and TVET institutions on capacity building and mobilization of labor resources to improve the economic efficiency of the SEZs.

1.8 Terms and Concepts

The principal concepts and terminology referred to within this report are based upon the ILO, UNESCO, World Bank accepted definitions, as follows:

Skill:

“Skill is defined as the ability to carry out the tasks and duties of a given job and has the two following dimensions:

1. *Skill level - which is a function of the complexity and range of the tasks and duties involved; and*
2. *Skill specialization - defined by the field of knowledge required, the tools and machinery used, the materials worked on or with, as well as the kinds of goods and services produced.” (ILO, 2004)*

Soft Skills:

1. *Thinking skills, both critical and creative*
2. *Behavioral skills, including perseverance, self discipline and teamwork.*
(World Bank, 2006)

Unskilled Worker:

An unskilled worker is one who possesses no specialized training and whose work involves the performance of simple duties which require the exercise of little or no independent judgment or previous experience although a familiarity with the occupational environment is necessary. (Mishra, 2010)

Semi-Skilled Worker:

A semi-skilled worker is one who does work generally of a routine nature wherein the major requirement is not so much one of judgment but of proper discharge of the duties assigned to him, or where important decisions are made by others. His work is thus limited to the performance of routine operations of limited scope. (Mishra, 2010)

Skilled Worker:

A skilled employee is one who is capable of working efficiently, exercising considerable independent judgment and taking responsibility for the proper discharge of duties. He must possess a thorough and comprehensive knowledge of the trade, craft or industry in which he is employed. (Mishra, 2010)

Technical and Vocational Education and Training (TVET):

“a comprehensive term referring to those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life.” (UNESCO, 2001, p. 7)

1.9 Research Scope and Limitations

The field research carried out within the two SEZs in Cambodia and Laos was intended to generate case studies of economically important locations that are policy relevant in furthering the ongoing dialogue on skills development in GMS countries. These sites allowed research in two new locations for industrial development within the region which has been given specific government support and approval to develop the infrastructure for the establishment of modern light industry in their respective countries. Therefore, they contribute valuable new data for evaluating the relevance and effectiveness of skills development strategies at national and regional levels. However, due to the small sample that were collected during the field research, the research findings cannot claim to be fully representative of the supply and demand for skilled labor at either the national or regional level. The situation varies considerably both intra and internationally within the GMS and thus constitutes an important topic for further study. The situation in the two locations are considered as case studies that would need further vetting and used as possible jumping boards for further researches.

The research is not intended to evaluate the effectiveness of SEZs per se as strategic policy approaches to socio-economic development. Determining whether or not the jobs offered in the SEZs provide a solid foundation for this type of progress to take hold in their host countries is an important issue to examine but is beyond the scope of this study. A recent World Bank article suggests that it is an assumption that needs to be carefully examined for individual SEZs and that the specifics of their implementation are key to determining their success in achieving policy objectives:

“SEZ impacts on host societies go well beyond economic efficiency. Zone programs that fail to offer opportunities for quality employment and upward mobility for trained staff, derive their competitive advantage from exploiting low-wage workers, and neglect to ensure environmental sustainability are unlikely to be successful in achieving the possible dynamic benefits, and are likely to be forced into a ‘race to the bottom.’ By contrast, zone programs that recognize the value of skilled workers and seek to provide the social infrastructure and working environment in which such workers thrive will be in a position to facilitate upgrading” (Farole, 2011, p. 4).

There can be significant differences in the definition of any given job title between countries (and even intra-nationally between geographic regions). However, this study is constrained by time and resources to conduct a comprehensive qualitative assessment of the skills mismatch between labor supply and demand, as well, to positively conclude that a mechanic graduated by TVET can indeed qualify to fulfill the requirements of a factory in SEZs along the economic corridors.

The research sample did not include interviews with TVET students or workers employed within the SEZs. Further quantitative research to determine the key motivations and constraints for students choosing to study in TVET institutions would be a valuable compliment to this research report (see section 5.5 for a complete list of recommended further research).

CHAPTER 2

SUB-REGIONAL AND NATIONAL SKILLS DEVELOPMENT SITUATION IN CAMBODIA AND LAOS

2.1 Sub-Regional Skills Development Situation in the GMS

The rapid economic expansion and industrialization of the GMS, combined with the challenges and opportunities presented by the subregion's dynamic links to global markets, as well as the emergence of new technologies and changing patterns of work, means that the requirements for skills development are ever shifting. However, the need to upgrade both the quality and quantity of skills training output at the national level in order to increase the competitiveness and productivity of the workforce in individual GMS countries has emerged as a clear imperative for policymakers. Ensuring the relevance of vocational skills training in this swiftly changing labor market, skills standardization and recognition to accelerate subregional integration in preparation for the establishment of the ASEAN Economic Community in 2015 (AEC), as well as the need to harmonize skills development regulatory frameworks at the subregional level are fast-gaining traction:

“Stronger subregional economic links are generating new skills requirements and employment opportunities within each country and across the subregion. To satisfy projected employment demands needed to sustain and promote economic growth and contribute to regional integration, significant improvement is required in the education and skill levels of the GMS workforce. National education and skills development systems need to be upgraded and made compatible so that the skills and qualifications of graduates are mutually recognized across the subregion. Higher education institutions need to be linked for better cooperation on standard setting and quality assurance mechanisms. Improved subregional cooperation is required to reach agreement in these areas” (ADB, 2009c, p. 2).

Developing subregional skills standards poses a significant challenge in the GMS. The obstacles to achieving such a standard are multi-faceted due to regional variances in individual countries' political histories, cultural values, levels of economic development and skills systems and policies. For example, an “automotive mechanic” in one country might be a panel beater, in another a spray painter or an engine repairer, while in another country one person might perform all these tasks alone. Hence looking at narrow occupational skill standards provides an inadequate approach.

Many GMS countries have large informal economies and agriculture is the main source of income for large segments of the population.(ILO, 2006) Informal economies in the region represent some very critical development target groups, being among the most marginalized groups, especially in the CLMV, and existing formal training apparatus in these countries are usually inaccessible to these groups (WGICSD, 2007).

Success in implementing universal primary education over the last decade in many GMS countries has translated into huge systemic pressure to expand the opportunities for further education and skills training. Skills are increasingly seen as critical to educational development, labor market inclusion and economic growth for the subregion. As a result, “there is an urgent need to reform, strengthen, and harmonize GMS vocational and technical training standards” (ADB, 2010, p. 3).

This section provides a brief overview of some of the key initiatives that have been undertaken to ameliorate these gaps in subregional skills development for the GMS in order to provide a policy and programmatic context for the case studies conducted in Cambodia and Laos.

2.1.1 ASEAN Economic Community

At the 12th ASEAN Summit in January 2007, the member states signed the Cebu Declaration to affirm their commitment to accelerate the establishment of an ASEAN Community by 2015. According to the AEC blueprint, the “ASEAN single market and production base shall comprise five core elements: (i) free flow of goods; (ii) free flow of services; (iii) free flow of investment; (iv) freer flow of capital; and (v) free flow of skilled labour” (ASEAN, 2008, p. 6).

ASEAN has been working on harmonization and standardization of skills and credentials among member states with a view of facilitating the free movement of skilled labor within the region. Initiatives have included enhancing cooperation among ASEAN University Network members to increase mobility for both students and staff within the region, developing core competencies and qualifications for job/occupational and trainers skills required in the services sector and strengthening the research capabilities of each ASEAN Member Country in terms of promoting skills development, job placements, and establishment of labor market information networks (ASEAN, 2008).

While these constitute valuable steps towards the establishment of regional skills standards in the region, these are focused on the standardization and recognition of the skills of highly-skilled professional workers and are therefore less applicable to the industry demands for vocational skills in many countries of the GMS. Workers from CLMV countries may have limited opportunities to participate in these arrangements due to questions about the quality of educational institutions within those countries.

2.1.2 GMS Human Resource Development Strategic Framework and Action Plan

In 1992, the GMS countries launched a regional cooperation program to promote economic and social development supported by the ADB. The economic framework of the program outlines an agenda for liberalization and integration of national markets for GMS countries to encourage sustainable use of its resources. (Sciortino, Caouette and Guest, 2008) The program includes nine key areas for cooperation including human resource development (HRD) (ADB, 2009b).

Under the Strategic Framework for HRD, “promoting regional cooperation in education and skills development” was chosen as a ‘strategic thrust’ to contribute to ‘harmonization of (i) competency standards, (ii) skills standards testing, (iii) accreditation systems including in the higher education sector, and (iv) training standards for technical and vocational teachers in occupations required by migrating workers’ (ADB, 2009b, p. 8). Building the capacity of GMS government officials, reinforce GMS institutions, and promote knowledge generation and dissemination would fall under this framework.

The 2007 midterm review of the GMS Strategic Framework determined that although key HRD concerns for the GMS were addressed, implementation were primarily project-based and lacked a clearly defined overall strategy. Consequently, a “strategic framework and action plan” was developed to increase the effectiveness of subregional cooperation on HRD and strengthen the program’s links with other subregional initiatives (ADB, 2009b).

The plan consists of priority actions to be implemented between 2009–2012 and contains 8 projects to be funded:

1. GMS Phnom Penh Plan for Development Management Phase 3 (*Capacity building of government officials and institutions*)
2. Phnom Penh Plan for Development Management Phase 4 (*Capacity building of government officials and institutions*)
3. Developing and piloting a framework for the mutual recognition of technical and vocational skills in the GMS Phase 1 (*GMS technical and vocational skills recognition framework*)
4. Developing and piloting a framework for the mutual recognition of technical and vocational skills in the GMS Phase 2 (*GMS technical and vocational skills recognition framework*)
5. Facilitating harmonization of technical and vocational teacher training standards
6. Facilitating subregional cooperation in establishing quality assurance systems in technical and vocational education
7. Facilitating subregional cooperation in establishing quality assurance systems in higher education
8. Adopting secondary level exit standards and cross-border recognition (ADB, 2009b)

2.1.3 ILO Regional Skills Programme for Asia and the Pacific

The ILO’s Regional Skills Programme (RSP) addresses the skills development priorities identified under the Decent Work Country Programmes (DWCPs) of its member states. The RSP provides services on skills development and employment issues confronting countries in the Asia and Pacific region through technical and advisory assistance on skills development and employment services to government, employer and worker organizations and institutions. RSP has been supporting major skills development projects in several GMS countries including Cambodia, Lao PDR, Thailand and Viet Nam.

The RSP has also established a Regional Skills and Employability network through its “Community of Practice” knowledge management system. The Community of Practice is a virtual and interactive platform that provides its members with a range of services and enhances cooperation on skills issues. Among its partner organizations are NCVER, SEAMEO VOCTECH, the Colombo Plan Staff College and other key stakeholder institutions in the region.

The ILO-RSP has developed a Regional Model Competency Standards which provides a generic set of competency standards for specific sectors. In 2010-2011, these standards were utilized in a collaborative pilot project with the ADB on standardization of occupations in some of the GMS countries.

The RSP is generally considered to have been effective in increasing cooperation, improving capacities, and providing technical assistance on skills development and employment services issues for the GMS. However, it should be noted that the RSP remains a comparatively small-scale action relative to vast the needs of the Subregion.

2.1.4 UNESCO International Centre for Technical and Vocational Education and Training

The International Center for Technical and Vocational Education and Training Centre supports UNESCO’s mandate of Education for All and Education for Sustainable Development. The Centre works on strengthening and upgrading the world-wide UNEVOC Network, specifically:

- Stimulating international and regional cooperation concerning human resource development
- Promoting UNESCO normative instruments and standards
- Promoting best and innovative practices in TVET
- Knowledge sharing
- Mobilizing expertise and resources
- Strengthening partnerships with other relevant agencies (UNESCO, 2012)

In the GMS, UNESCO focuses on increasing the effectiveness of its network of UNEVOC centres, developing national qualification frameworks (NQFs) and regional qualification frameworks (RQFs), assessing TVET systems, and developing more evidence-based TVET programs that are relevant to labor market needs.

2.2 National Skills Development Situation in Cambodia

Despite rapid economic growth in recent decades, the Cambodian economy has not been able to generate sufficient industrial sector jobs to meet the employment needs of its workforce, leaving the majority of Cambodians still working within a large informal sector and/or vulnerable employment (Kimsay, 2012). The wages for such employment are often low, require long working hours, inadequate or dangerous working conditions. Coupled with a lack of social protection programs, many workers cannot afford to be jobless for long,

and are highly vulnerable when shocks to their income occur. Specific groups face particular challenges as well, the youth who make up the bulk of the unemployed in both urban and rural areas. Women are burdened with traditional barriers in gaining equal access to education. Indigenous populations face limitations in the labor market, many of which are linked to shrinking land ownership, discrimination and deficits in access to education and training.

The gap in soft skills in Cambodia has become a critical development challenge. These include intangible skills such as commitment, communication, creativity, decision-making, problem solving, self-motivation and teamwork. Recent literature on human capital emphasizes the importance of such skills, both in the process of human capital development as well as a determinant of schooling and employment outcomes. Some of these soft skills, such as punctuality or teamwork, can be learned on the job. However, other skills are best learned in institutional settings, such as schools and training centers. Employers identify soft skills in Cambodia as the most important skills lacking in most employees (World Bank, 2010).

In its 2010 report, *‘Preparing Cambodia’s Youth for the Labor Market’* the World Bank noted that one of the country’s major challenges was *“to train a largely unskilled labor force to sustain growth in the medium term and to share more equitably in the benefits of development”*:

“Employers’ surveys suggest a growing demand for workers with a mix of soft and technical skills that remains largely unmet at the way up the educational ladder, including in vocational training. In the three booming sectors outside of agriculture (i.e. garments, tourism and construction), only one out of five firms reports that vocational training graduates (who, in theory, have been trained for specific jobs) have the necessary set of skills to perform their job. All other employers complain of moderate or severe skills gaps” (World Bank, 2010, p. 21-22).

Low completion rate for secondary schooling and quality deficiencies in vocational training are emerging as key causal factors in this skills gap. Of Cambodia’s youth population, aged between 15 and 24 years, 63% are out of school, either having never attended school or having left school before completing basic education, and 94% of the youth labor force have not completed secondary education (World Bank, 2010).

Reasons for leaving schools among Cambodian youth are varied. Some simply are not able to follow an academic curriculum and others have no interest in school work. However, for many families, the lack of financial resources to support their children’s schooling and the need for additional income earner to support the family are principal concerns.

This suggests that there is potentially a large pool of students in Cambodia who are not currently being served effectively by the general education system and who could be brought into a TVET system that was more relevant and directly linked to employment opportunities (World Bank, 2010).

According to the ILO Decent Work Country Programme for Cambodia 2011-2015, given its current stage of development and new economic structure (industrial and labor intensive), strengthening the provision of TVET has become a key immediate term priority for Cambodia in addressing these challenges. Developing a national TVET framework, adopting competency based skills standards, and strengthening the capacity of training providers to deliver quality training that responds to actual labor market needs have been identified as skills development focus areas for policymakers (ILO, 2011a). Two key agencies are involved in developing and implementing national TVET policies in Cambodia.

2.2.1 TVET Policymaking Institutions in Cambodia

1. Ministry of Labour and Vocational Training

The Ministry of Labor and Vocational Training (MoLVT) acts as the secretariat and implementing agency for the TVET policies developed by the National Training Board (NTB). Its mandate is:

1. To develop and sustain a TVET system that meets the needs of the Country for economic and social development as expressed in the Rectangular National Development Strategy
2. To provide enterprises with a skilled and adaptable workforce
3. To respond to the lifelong needs of individuals to prepare for or maintain decent jobs or self-employment.

To meet these directives, the MoLVT has formulated a National TVET Development Plan which is centered on a two track TVET development approach that supports both poverty reduction and industrial development. However, it currently lacks the necessary human resource capacities and budgetary means to fully implement these policies.

The MoLVT manages 22 Provincial Training Centers delivering short non-formal programs to a predominantly rural population. Since 2005, all public vocational training schools fall under the authority of the MoLVT.

In the past few years, the MOLVT, with the support of the ADB, has been initiating new models for delivery of Cambodia's TVET programs. A Vocational Skills Training Program was successfully piloted in seven provinces which offers three diverse modalities for vocational training: community-based, employer-based, and training center-based (World Bank, 2010, p. 24).

Using participatory planning techniques under the ILO's Training and Employment Needs Assessment methodology, communities decide on which programs would best serve their vocational training needs. As a result, the Provincial Training Centers of the MOLVT, which in the past were the only location used for delivering training regardless of the needs of the community, have learned to become more demand driven and student-centered.

Progress in developing a more responsive TVET system in Cambodia is notable and outstanding challenges are being addressed. Key issues include the existing skills mismatch and skills gap, youth unemployment, the lack of reliable information on availability of skills within the labor market, and skills training programs that do not adequately respond to industry requirements.

2. The National Training Board

The NTB was established in 1996 by the Cambodian Government to coordinated long term development strategies for the TVET system. With Sub-Decree 14,10,05, the first National TVET Plan was prepared to develop and renew the TVET system in 2005 (Cambodian National Training Board, 2008b).

Table 2.1: Mandate of the National Training Board under Sub-Decree 14,10,05

1. Prepare a Policy and National Training Plan for TVET.
2. Coordinate and orient the work of TVET to meet the demand driven needs of the National Economy in the present and future.
3. Propose a project to renew and further develop the TVET System to be: <ul style="list-style-type: none"> ➤ Quality driven and effective ➤ Linked to National development priorities ➤ Respond to the needs of trade, industry agriculture and service sectors ➤ Relationship between workplace and institutions

Source: National Training Board (2008)

In-line with the Third National Strategic Development Plan, the TVET strategy seeks to enlarge the labor skills-base both to reduce poverty and to create a platform for an expansion of industrial production. Through advancing the progress of TVET that is responsive to the demands of an industrial based economy, NTB is mandated to ensure that TVET training benefits the greatest number of Cambodians. This requires a carefully balanced distribution of TVET resources to provide for the needs of manufacturing growth in the nation's capital region, family-based work in many of the rural provinces, and expansion of tourism in others (Cambodian National Training Board, 2008a).

Specific sectors which have been designated for skills standards development include tourism, garments, and construction, which all reflect potentially dynamic growth sectors for Cambodia. Public-private partnership is anticipated to significantly facilitate TVET implementation, as do capacity building of trainers, improvements to physical infrastructure, and strengthening of the NTB itself (ILO, 2011a).

3. The National Employment Agency

Operating under the authority of the NTB, the National Employment Agency (NEA) was established by a sub-decree in April of 2009 to provide jobseekers, employers, employees, policymakers and TVET providers with employment and labor market services. The NEA carries out five main duties and responsibilities:

1. Provide information services in an open manner to bring together all relevant stakeholders;
2. Research and develop the labor market information system to suit the current and future economic growth needs of Cambodia;
3. Disseminate information on employment, the labor market, technical skills and vocations via NTB's website and other methods;
4. Coordinate and collaborate with ministries, institutions, development partners and civil society organizations to generate information on the labor market, technical skills and vocations in order to propose feasible recommendations to NTB;
5. Provide accurate labor market information and data as the basis for government strategies to manage human resource development and improve the efficiency of the labor market (Cambodian National Employment Agency, 2012).

Significant work remains to be done in consolidating and capitalizing on the database within NEA, which is currently neither complete nor updated and cannot effectively fulfill the information requirements of jobseekers and TVET institutions.

2.3 National Skills Development Situation in Lao PDR

Majority of the workforce in Laos continues to be engaged in agrarian employment, with the agricultural sector accounting for 75% of national employment. Productivity in this sector is 4-10 times lower than in non-agriculture sectors. Low productivity combined with high unemployment rate constitute a major block to poverty reduction and competitiveness. Although economic growth and structural transformation has continued at a rapid pace, the transition out of agricultural employment has remained relatively slow, particularly given its reduced contribution to the GDP of Laos. At the same time, the more rapidly growing sectors of the economy have not created enough jobs to make a considerable impact on the structure of employment in Laos (ILO, 2011b).



Low productivity levels of the workforce in Laos are mostly explained by enduring weaknesses in its training and educational systems. Low educational attainment among the workforce and the lack of established national standards for vocational skills means that competencies established through TVET programs are often inconsistent. Employers thus are most often frustrated by the lack of sufficiently skilled candidates to fill job openings (ILO, 2011b).

Lao PDR currently lacks accurate and up-to-date labor market information to formulate effective skills development policies. The lack adequate evidence-based information on the state of the labor market, as well as the pattern and trajectory of industrial development in the country hampers the crafting of market-responsive TVET. The TVET in Lao PDR is presently undersubscribed and ineffective due to weak industry relevance. It is constrained by poor quality teaching and curricula. The labor market is characterized by a large and growing mismatch between the skills available and those required by enterprises, undermining both productivity and competitiveness (ILO, 2011b).

Lao policy makers enacted Decree No. 036 on TVET and Skills Development in January of 2010 to ensure that Lao workers acquire the knowledge, competencies and mind-sets for productive employment. The Decree defines the principles, regulations, and measures for establishing national skills standards, as well as skills testing and certification mechanisms. It sets the requirements for skills standards to be developed at various levels and certified by a recognized authority (a national vocational consulting and skills development council). The agreed upon standards should be recognized by employers and appropriately remunerated, and that new employees lacking certified skills should undergo skills assessment testing. The Decree also defines stricter regulation of training providers to improve quality control mechanisms within the TVET system. (“Decree on TVET and Skills Development,” 2010) National skills standards for the construction sector have been established and it is anticipated that automotive skills standards will be developed by 2012.

Several donor-led initiatives are also currently being implemented in Laos, the largest of which is probably the ADB’s \$23 million USD Strengthening TVET Project which kicked-off in 2011. The project aims to improve the quality of TVET, increase and more equitable access to TVET, increased private sector involvement in TVET strategy and delivery and strengthened governance and management of the TVET system. (ADB, 2012b) The ILO has also been actively supporting Lao PDR with developing national skills standards, testing and certification systems, and capacity building for the MoLSW, MoE and other relevant public and private sector organizations.

2.3.1 TVET Policymaking Institutions in Lao PDR

1. The Ministry of Labour and Social Welfare

The Ministry of Labour and Social Welfare (MoLSW) has been mandated to set the national skills standards for the country, including developing the testing and certification system. MoLSW is set to establish national skills standards for 16 employment categories by 2020. Various projects that were undertaken have resulted in the creation temporary standards across more than ten occupational categories such as metal welding, concrete works, refrigerator and coolant technicians, poultry production and tourist guides, at four different skills levels in semi-skilled to technical supervisors. Concomitant efforts are underway to strengthen the delivery of training for these standards through physical upgrading of training centers and strengthening the capacity of teachers to deliver high-quality training. However, significant work remains to be done in implementing these policies, particularly in relation to the free movement of the ASEAN region’s labor force by 2015.

With support from ILO, MoLSW has established 9 employment services job centers in Lao PDR. These centers aim to help jobseekers find productive employment, on the one hand, for employers to find their required skilled workers. However, lack of resources and capacities hamper the effective performance of the centers.

2. Ministry of Education

In June 2007, the Ministry of Education (MoE) approved the Master Plan for Development of TVET 2008-2015. An inter-ministerial team was set up to produce the Plan with the assistance of Luxembourg's Agency for Development Cooperation. Seven strategic projects have been identified for implementing the Master Plan:

1. Construction, upgrading and expansion of TVET institutions;
2. Marketing and promotion of TVET;
3. Qualifications, training and professional development of TVET teachers and other staff;
4. Quality assurance of TVET;
5. Development of TVET information resources;
6. Improvement of the organizational structure of the TVET sector; and
7. Formulation of macro-level policy and management tools.

The Master Plan provides clear directions and performance indicators for the implementation of the plan at TVET institutions, as well as the responsibilities of relevant line ministries and other organizations to ensure effective collaboration between stakeholders (Lao PDR Ministry of Education, 2008).

2.4 Conclusion on the Sub-Regional and National Skills Development Situation in Cambodia and Laos

Governments, international organizations and donors are beginning to take notice of the skills development gaps in Cambodia, Laos and GMS in general. Various strategies and interventions are currently being planned or are already in motion to reform and modernize the TVET systems to make them more relevant, responsive and effective in filling these skills deficits. These will likely require long-term technical assistance and financial support for capacity building of teachers, upgrading of institutions, establishment of strong linkages with private sector industry, and improvements in affordability and accessibility.

Although recurring patterns occur subregionally, the challenges and needs faced by individual countries within the GMS are distinct and specific. There is a need to carry out further research and dialogue between stakeholders, as well as improve systems for ongoing collection of labor market data, on the particular skills gaps that exist at both regional and country level as the basis for further action. Improving the evidence-base for skills development policies is a critical step towards developing TVET systems that are more appropriate and responsive to the current developmental stages of GMS countries and for progress towards the establishment of subregional skill standards.

CHAPTER 3

LABOR SUPPLY AND DEMAND IN SAVAN-SENO SPECIAL ECONOMIC ZONE

3.1 Introduction to Savan-SENO Special Economic Zone

Savan-Seno Special Economic Zone (SSEZ) is located in Savannakhet Province of Lao PDR, a central crossroads point within the GMS. Situated along the East-West Economic Corridor (EWEC) linking Myanmar, Thailand, Lao PDR, and Vietnam (Road No.9), the SSEZ is located mid-way between the Vietnamese sea port of Danang (about 500 km from the Zone) and the Thai port of Bangkok (about 600 km from the Zone).

It is also located along the North-South axis (Road No.13) that runs through Lao PDR, and extends north into China and South into Cambodia. A new Mekong River bridge will provide a further transport link between Savannakhet, Thailand and North/ Central Vietnam and is expected to expand business opportunities through improved access to markets. Due to its strategic central location in the junction of major East-West and North-South transportation routes, SSEZ is anticipated to become a hub for trade and services flowing between the countries of Laos, China (Yunnan Province), Myanmar, Thailand, Cambodia and Vietnam.



Established through Prime Ministerial Decree No. 148/PM on September 29th 2003, the SSEZ seeks to create job opportunities and improve living standards through increased economic activity along the EWEC. The SSEZ was designed to attract local and foreign investment through special incentives including duty-free status for imported and exported products, one-step service station that assures prompt and transparent authorization and licensing of investments, and other necessary facilities and services needed by investors and developers. The SSEZ serves as a multi-purpose site for export processing, free trade, logistics, including tourism, banking and related services.

The Special Economic Zone Authority (SEZA), which is a government agency, manages the SSEZ and is mandated to promote and facilitate domestic and foreign investment in the SSEZ, including the responsibility for the design, construction and administration of the Zone.

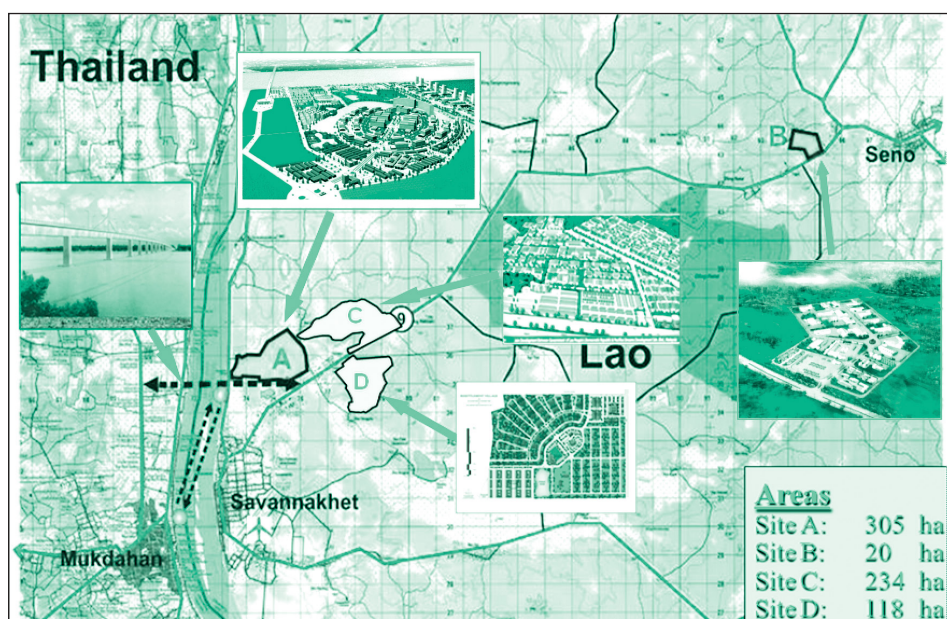
Although planning for the SSEZ began in 2003, the zone is still currently in its initial stage of development. The facilities in A, B, and C sites of the SSEZ are presently under construction. However, more than 90% of its capacity has already been registered to investors. As of December 2011, investment in the SSEZ was valued at over \$94 million USD, covering 27 projects (Diamond, 2011).

3.1.1 Businesses and Facilities Located in Savan-SENO Special Economic Zone

The SSEZ is geographically composed of four separate sites located in Savannakhet Province:

Site A: Savan City (305 has.) is located immediately upstream of Savannakhet's capital city, Khanthabouly, and is next to the new Mekong River Bridge. The businesses expected to operate here include duty free shops, a hospital, hotels, a convention hall, an amusement park and others. Thai Airport Ground Services has signed a contract to invest in the area as has Savanlo Co., Ltd., for development of tourism facilities including hotels, restaurants, malls, and other infrastructure (See Appendix II for a map of Site A).

Figure 3.1: Savan-SENO Special Economic Zone



Source: SEZA (2012)

Site B: Logistics Park (20 has.) is located 28 km east from Khanthabouly city, at the junction of the National Road No. 13 and National Road No. 9. At present, 50% of the area has been developed with three companies investing in the site: Double A logistics (Thai), Nanon Logistics (Thai) and Logitem (Japan). The Government of Lao PDR has also made a request to the Japan Bank for International Cooperation (JBIC) to fund the possible expansion and development of the area (See Appendix II for a map of Site B).

Site C: Savan Park (211 has.) is located 28 km from Kaysone Phomvihane city. There are 24 investors currently registered in this zone, including Lao, Malaysian, Japanese, Thai, French, American, South Korean, Australian, and Dutch companies. These companies are primarily engaged in construction, manufacturing, real estate, and service related enterprises (See Appendix II for map of Site C and Appendix III for a complete listing of companies).

Site D: Resettlement Site (118 has.) is located 8 km from Kaysone Phomwihan city. The site is intended to provide resettlement services to the people affected by the appropriation of their land during construction of the SSEZ. 76 families have been compensated approximately \$300,000 USD for the loss of their properties resulting from the development of the industrial park. (Diamond, 2011) The housing facilities in the site are currently under construction (See Appendix II for a map of Site D).

To facilitate the flow of goods and services through the SSEZ, the Lao Government plans to upgrade the existing domestic airport in Khanthabouly city in Savannakhet Province into an international airport.

3.2 Labor Demand within Savan-SENO Special Economic Zone

SEZA authorities estimated that businesses registered in the SSEZs require about 1,989 workers as of 2011 (See Table 3.1 below). Representatives of some of the key stakeholders, including developers, the MoLSW and the SEZA, indicated that the lack of availability of the skilled labor required for these businesses to operate is a major operational concern in the Zone.

Table 3.1: Labor Demand by Occupation in Savan-SENO Special Economic Zone

	Occupation	Site A	Site B	Site C	Total
Workers required	Management/Accounting	60	70	300	430
	Electrician	5	4	77	86
	Maintenance Mechanics	4	4	100	108
	IT/Computer Technician	11	8	80	99
	Cook	4	-	-	4
	Automotive Mechanic	-	-	200	200
	Sewer/Dressmaker	-	-	240	240
	Construction	-	-	200	200
	Truck Driver	4	19	20	43
	Welder	-	-	30	30
	Designer	20	-	-	20
	Gem Lapicide	208	-	-	208
	Unskilled Worker (housekeeper, laborer)	12	9	300	321
Total		328	114	1547	1989

Source: SEZA (2011)

According to a developer, a vocational training center is planned to be built inside the SSEZ to provide vocational skills training to workers. Other businesses have begun sending their staff for training overseas. An aircraft assembly company in Site C of the SSEZ plans to send nearly 200 staff abroad to undergo training. This represents additional overhead cost which many companies are may be unwilling to absorb.

The use of migrant labor can be an option to fill in the gap. However, MoLSW regulations only allow companies to employ 10% skilled foreign workers of its general workforce and 20% of its management staff.

3.3 Labor Supply Available from Local TVET Institutions in Savannakhet

Savannakhet currently has two large-scale TVET institutions. One is a public vocational college called Savannakhet Vocational and Technical School (SVTS) and another is a private institution called Xaysombath Technology College (XTC). According to a key informant from the MoLSW, 4 billion Kip (USD 500,000) has been allocated to build a vocational skills training center in Savannakhet as part of the Decree on TVET and Skills Development and the Master Plan for Development of TVET.

3.3.1 Savannakhet Vocational and Technical School

Facilities: SVTS was founded in 1956 and its physical footprint spreads over two campus areas. One campus, Hua Muang Tai, has 2 buildings with 40 classrooms, 3 workshops for dress making, construction engineering, and hotel management. The second campus provides training for factory mechanics, automotive mechanics, electronic engineering and electricians, construction work, carpentry, cooking and food services, engineering and business administration. Workshop areas are shared by the two campuses, enabling the school to teach all of its courses. ADB is providing funds to construct additional classrooms, stipends for students and other operational expenses of the SVTS.



Teaching capacity: There are currently 139 teachers working at SVTS. Three of these teachers hold master's degrees, while around 60 completed bachelor's degrees, and the remainder possess vocational certificates. According to interviews with the Vice Principal of the school, the teaching staff need to improve their level competencies to effectively train the students. Each department has a short and long-term teacher development program, with 50 teachers to be trained in Thailand, Vietnam and Vientiane annually. Teachers from the mechanics, electronics and IT departments particularly receive further training.

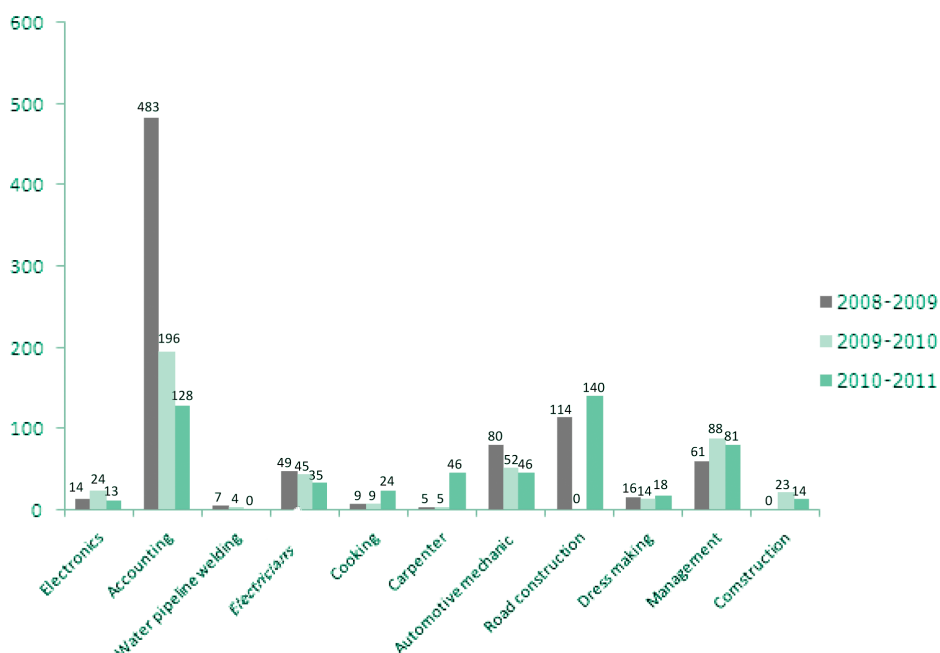
Curriculum: The school's curriculum is largely top-down in determining its course offerings and content with 80% of its courses defined at the national level. The remaining 20% are initiated by the school itself based largely on feedback from companies where students served as trainees.

Enrollment: The total number of students at the school presently is 611. The school has implemented a public relations strategy to attract students and increase enrollment. This strategy involves sending teachers who provide guidance to students in schools within Savannakhet Province during the two weeks before their final examinations, distributing

brochures about the school's programs to young people, and advertising in the local newspaper, on radio and other media outlets.

Matriculation by Subject Area: Accounting is the most popular subject at SVTS, followed by road construction and management (see figure 3.2). The school's vice principal indicates that the trend in student enrollment has been towards management and accounting certificate programs as opposed to more traditional vocational skills. Yet the labor market largely demands workers with technical and vocational skills rather than office and administrative skills. It is notable that the overall graduation figures for SVTS decreased by 35% over the last few years, from 838 graduates in 2009 to 545 graduates in 2011.

Figure 3.2: Students Graduating from Savannakhet Vocational and Technical School by Subject Area (2009-2011)



Source: Savannakhet Vocational and Technical School (2012)

Links to Industry: The school does have some linkages to the private sector which it tries to leverage for the benefit of its students. These include sending students to work as interns at companies such as the Ko-Lao company (Korean Automobile Company) and assigning teachers to provide skills training directly at work sites for companies such as Sepone Gold Mining and OTOP center. Investors from the SSEZ have also visited the school hoping to recruit approximately 200 students for employment but the school has not committed to their request as of yet due to the small size of their enrollment. The school's officers are quite confident that 100% of their students will be able to find employment after graduation.

3.3.2 Xaysombath Technology College

Facilities: XTC was founded in 2006 by a private entrepreneur named Mr. Suksawan Chaisombat. Its facilities include five classroom buildings and three dormitories but still lacks some of the new machinery necessary for practical instruction. The ADB provides living allowances for a portion of the college's students and supplementary funding for the college's operating budget.

Teaching capacity: Mr. Chaisombat founded the school desiring to share his knowledge with the new generation and to invest in the human resource development of Laos. At the onset, he sent some of the current teaching faculty to further their educations in Thailand, Vietnam and Vientiane. There are presently 28 teachers at the school, two of whom are with doctorate degrees and five with master's degrees. The remainder faculty hold bachelor's degrees and vocational certificates. A major challenge to improving the quality of training provided at the school is the capacity of its teachers. General competency building, as well as training in specific skills as new technologies and industrial processes emerge, are greatly needed.

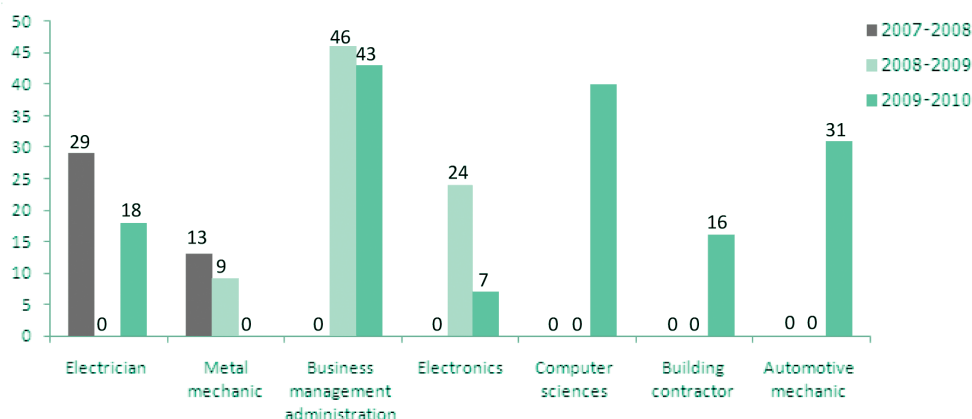


Curriculum: The curriculum for the college is mostly based upon the guidelines of the national curriculum set by the Ministry of Education. Other considerations for curriculum design have been the capacity of the teachers to properly carry it out as well as comments received from companies where students were sent to work as trainees. XTC is accredited to award vocational certificates for automotive mechanics, electricians, metal mechanics, electronics, computer science, building contractors, industrial production, and maintenance and bachelor's degrees in Business Management Administration.

Enrollment: Some 700 students are currently enrolled at XTC and the figures appear to have been increasing steadily since the schools founding in 2006.

Matriculation by Subject Area: Computer science and automotive mechanics are new and popular subjects at XTC, although most enrollees choose to pursue business management administration (see figure 3.3). According to the principal of the college, many students prefer to work at the management level rather than in technical and vocational positions. He regretfully noted that there is a less positive value placed on studying these types of trades by the younger generation. He believes that this decline in interest does not correlate with the high demand that exists for skilled workers in such occupations as welding, carpentry and mechanics. This poses difficulties in meeting the demands for skilled workers in the labor market.

Figure 3.3: Students Graduating from Xaysombath Technical College by Subject Area (2007-2010)



Source: Xaysombath Technical College (2012)

Links to Industry: The school is creating stronger connections with private sector companies. One promising channel is the 8-week internship program for students at local companies in an explicit “*try before you buy*” arrangement. If the intern performs satisfactorily, they are likely to be recruited by the employer immediately after graduation. The school also encouraged business owners to visit or place advertisements about job vacancies at the college.

3.3.3 Vocational Skills Development Training Center

The Lao PDR central government has allocated funds to MoLSW Lao PDR Government for building a new vocational skills development training center to be completed by April 2013. The school site is to be located approximately 70 kilometers from the SSEZ with a projected enrollment capacity of about 300 students. The vocational programs for the training centre are targeted to meet needs of the industrial sector in Savannakhet, including:

1. Electrical wiring
2. Welding
3. Cooking and service
4. Tailoring
5. Building contracting
6. Electronics
7. Carpentry
8. Mechanics
9. Computer science

The teachers for this new center will be recruited by the MoLSW and will teach the standard national curriculum for TVET schools.

3.4 Private Employment Agencies in Savannakhet

Apart from the Job Employment Sub-division of the MoLSW, which provides information to workers on employment opportunities in Savannakhet Province, the field research has identified only two private employment agencies (PrEAs) that are operating in the province. Both PrEAs hold offices near the Mekong River and are providing recruitment services for jobseekers, particularly for positions offered in Thailand, Malaysia, Singapore and other international locations. International labor migration represents a major livelihood option for the Lao workforce but the high volume of migration outflows has also had detrimental impacts on national skills development. A study conducted by the World Bank found that 37% of educated Laotians were living abroad, ranking the country as experiencing the fifth highest level of “brain drain” worldwide (Schiff & Ozden, 2005).

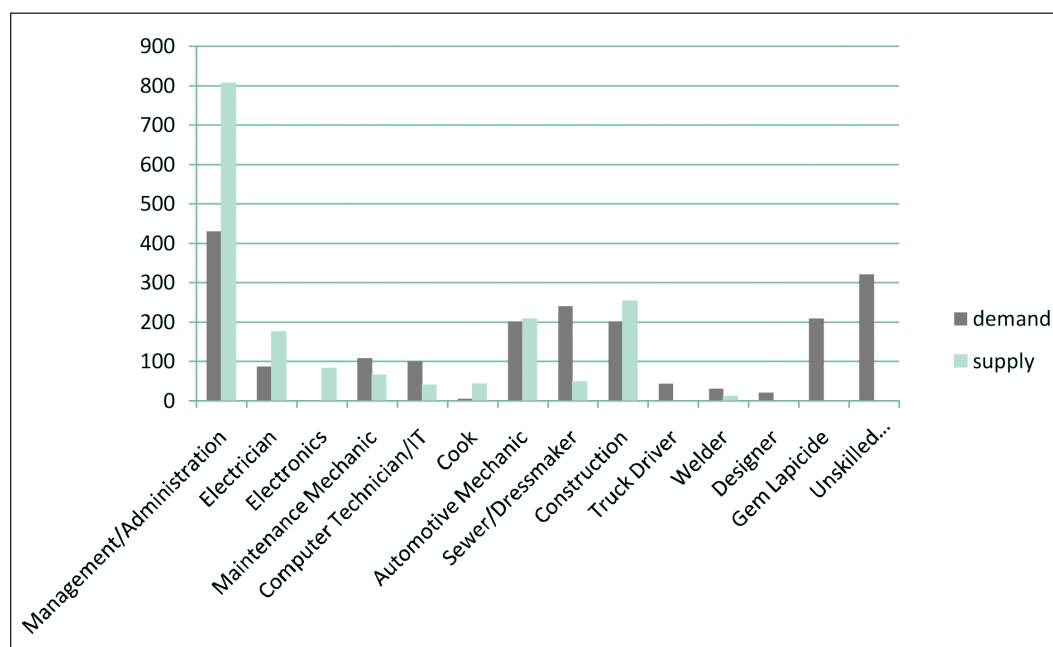
However, if the absence of PrEAs identified during the study is representative, it could also be considered a lost opportunity for encouraging internal migration to fill labor market needs. PrEAs have historically been a source of exploitation and abuse for migrant workers in the GMS. However, changes in labor markets over the last several decades have caused a reassessment of the potential for PrEAs to make a positive contribution in the GMS and beyond. PrEAs, if properly regulated, are now considered by many in the international community to be possible contributors to the economic efficiency of labor markets, act as catalysts for new forms of human resource management and even prospective supporters of better working conditions for employees (ILO, 2007).

This new perspective on the function and regulation of PrEAs was established in international law under the ILO Convention on Private Employment Agencies, No. 181, although it should be noted that none of the countries in the GMS have yet ratified the convention.

3.5 Skilled Labor Supply and Demand Mismatch in Sava-SENO Special Economic Zone

The overall figures for labor demand in the SSEZ (1,989) were found to be higher than the number of students graduating from local vocational schools in Savannakhet Province (1,734), however, subtracting the 321 unskilled workers required makes this shortage insignificant. A more meaningful comparison was found in the breakdown by occupational skills, which appear to indicate that mismatches in supply and demand exist for certain specific skill areas (see figure 3.4). For example, the number of students who obtain business management and accounting qualifications is nearly double the amount needed within the SSEZ. At the same time, an insufficient number of workers have been trained at the local TVET institutions to fill positions as IT/computer operators, maintenance mechanics, welders, sewers/dressmakers, gem lapicides, and others.

Figure 3.4: Skilled Labor Supply and Demand Mismatch in Savan-SENO Special Economic Zone



Source: SEZA and TVET schools in Savannakhet (2012)

While the significance of these quantitative gaps in skills should perhaps not be over analyzed, they do appear to corroborate the findings from key informant interviews and secondary sources of data. They reveal important concerns about the labor market's capacity to support the future growth of the SSEZ as the TVET system already appears to be straining to keep up with the demand for skilled labor. Representatives of the SEZA who were interviewed stated that after all of the construction on the zone's infrastructure has been completed during the next 10 years, it is expected that the SSEZ will have the capacity to provide jobs for more than 5,000 workers. This suggests that a much wider gap between the supply and demand for skilled labor could potentially emerge, threatening the SSEZ's ability to expand to meet its objectives of job creation and improvement of living standards.



Interviews with representatives of key stakeholders, field visits to research sites, and review of secondary sources of information revealed five main causal factors for the skills mismatch in the SSEZ:

- 1. Lack of interest in vocational skills training:** As the majority of Savannakhet's working age population still has the option of working in the agricultural sectors or other informal sector jobs, many are less interested in improving their vocational skills in order to be more competitive in the labor market. Compounding the lack of interest in TVET is the availability of high paying unskilled employment in neighboring Thailand. Research conducted in Lao PDR has found that many families question the usefulness of further schooling for their children on the grounds that education does not lead to better jobs after migration to Thailand (TWG, 2008). As the Thai labor market currently does not provide significant financial rewards for credentials obtained in countries of origin, there is little incentive for workers considering migration to pursue TVET.
- 2. Preference for studying business management and accounting subjects:** A large portion of the students (and their parents) who have the ability and resources to pursue further education prefer to study management and accounting subjects rather than in vocational fields. This may be partly because of a desire for the higher social status offered by office positions as well as lack of information about the availability of well-paying jobs in technical and vocational occupations.
- 3. Low incentives offered for work in the SSEZ:** The low wage-scale for labor within the SSEZ is simultaneously a key attraction for international companies looking to lower their production costs, as well as a major disincentive for skilled workers to seek employment there. The minimum wage range in the SSEZ is currently between \$70-100 USD/month depending upon position. When compared against the minimum wage in Thailand, which was recently raised to 300 Baht per day (around \$10 USD) and can be earned for unskilled employment, studying at TVET institutions in order to fill jobs in the SSEZ becomes a less attractive prospect.
- 4. Unavailability of accurate labor market information:** Information from government agencies is inadequate in terms of the current state of the labor market and the expected trajectory of industrial development of Savannakhet Province. As a result, employers in the SSEZ tend to seek out workers by themselves rather than working through the networks of the MoLSW or TVET schools.
- 5. Insufficient quality and relevance of TVET:** Teachers at vocational schools need to improve their levels of competence to provide higher quality training, a present obstacle in attracting additional students to TVET study. Linkages to the private sector are currently inadequate for ensuring that TVET courses are relevant to the skills now in demand by industry.

3.6 Conclusion on Labor Supply and Demand in Savan-SENO Special Economic Zone

The ILO has estimated that an additional 200,000 skilled workers will be required annually from 2011 to 2015 (ILO, 2011c, p. 8). It is clear that this will pose a major challenge for the existing TVET system of the country as reflected by the results of this case study. Even in Savannakhet Province, which is frequently promoted as one of the most economically dynamic areas of Laos, there appears to be an increasing skills gap that threatens to slow the pace of industrial development.

Donors, government authorities, and the private sector are taking actions in reversing the trend of a widening skills gap. A comprehensive and evidence-based understanding of the reasons why the supply-side gap in skilled labor exists would be an important guide in crafting corrective measures.

The vocational skills training center focuses to develop electricians, welders, cooks and services, tailors, building contractors, electronic engineers, carpenters, mechanics, and computer technicians. While this appears respond to identified needs within the labor market in Savannakhet, the number of students who will be both willing and able to train for these occupations remains a critical question. As the recent trend among students has been to pursue education in such fields as management and accounting rather than TVET, it is essential to understand the factors decisions and options taking process by students.

Interventions to build the capacity and infrastructure of TVET institutions appears to be a clearly indicated need for progress on skills development in Laos. However, broad-based engagement and consultation with government, private sector and workers/student representatives are essential in developing a strategy that is likely to have a substantial and sustainable impact.

CHAPTER 4

LABOR SUPPLY AND DEMAND IN PHNOM PENH SPECIAL ECONOMIC ZONE

4.1 Introduction to Phnom Penh Special Economic Zone

The Phnom Penh Special Economic Zone (PPSEZ) was established in 2006 as a new SEZ on the outskirts of Cambodia's capital city of Phnom Penh. It is one of several SEZs that have been developed along the Southern Economic Corridor (SEC) to increase trade and investment in Cambodia, particularly for the garment industry which accounts for more than 60% of the total production value of the manufacturing industry in the country (Sisivanna, 2011, p. 104). Its location in one of the major cities along the SEC is expected to support the PPSEZ as an engine for growth, boosting manufacturing output, exports and employment for the country.



Including the PPSEZ, the Cambodia Government has so far officially approved the establishment of 13 SEZs by Sub-Decree, and 8 additional SEZs have been authorized by the Cambodian Special Economic Zones Board (CSEZB) for construction. The PPSEZ, as well as a total of 20 out of the approved 21 SEZs are owned by the private sector.

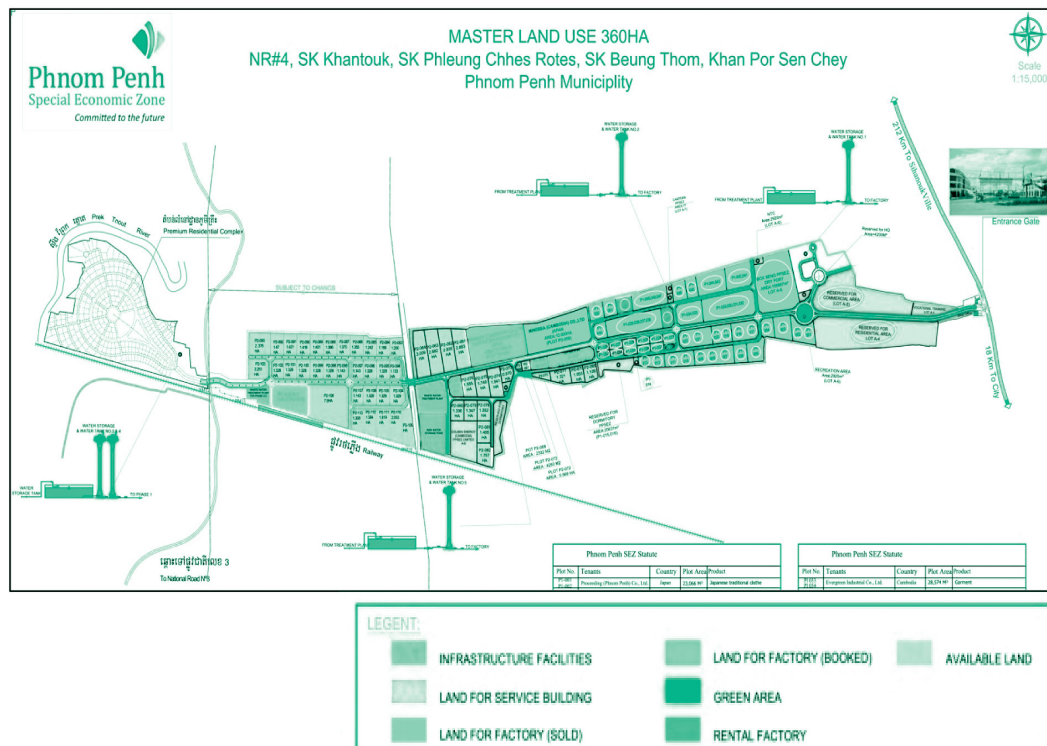
The Cambodian government provides incentives to qualified investment projects (QIPs) to encourage investments at the PPSEZ. A QIP is a project which has received a Final Registration Certificate from the Cambodian Investment Board or other relevant government authorities. Incentives for QIPs include:

1. Profit tax exemption;
2. Tax exemption on import value added tax (a suspension of the 10% VAT on imported items);
3. Tax exemption for imported construction materials and production equipment;
4. Attractive investment conditions in Cambodia such as
 - a. renewable and transferable 99-year leases on land for foreign individuals and companies
 - b. no restrictions on international currency transfers and remittances
 - c. 100% foreign ownership for any business

4.1.1 Businesses and Facilities Located in Phnom Penh Special Economic Zone

The PPSEZ's facilities cover a total of 360 has. which are being developed in three phases. Forty-four registered investors are now in the process of setting up their factories in the PPSEZ, however, only 14 factories have begun operating (see Appendix III for a complete listing of companies).

Figure 4.1: Map of Phnom Penh Special Economic Zone



Source: PPSEZ (2012)

The PPSEZ currently houses the factory facilities of light, medium and labor intensive industries, including:

- garment, shoe and fashion industries
- mechanical and electrical products destined both for export and the local market
- light chemical industries
- food processing and agricultural industries for regional and local markets
- consumer products (pharma, transportation, packaging etc.)
- assembly of pre-produced parts to final product for regional and local markets
- logistics companies

4.2 Labor Demand in the Phnom Penh Special Economic Zone

PPEZ officials estimate that a total of 14,243 workers are needed by business that are currently operational in the Zone (Table 4.2). The current number of workers employed in the zone is 6,700, leaving a gap of some 7,543 workers to be filled from the labor market. Interviews with key stakeholder representatives in Laos revealed that the labor shortage in PPSEZ is a critical issue to be overcome in supporting the expansion of industrial activity.

Table 4.2: Employment and Labor Demand for Companies Operating in Phnom Penh Special Economic Zone

Company Name and Business Type	Current # of Workers	# of Workers Required
KYOWASEIKAN CO., LTD. (Japan) Luxury Boxes	237 (9 Men/228 Women)	250
PROCEEDING CO., LTD. (Japan) Japanese Traditional Clothes	267 (15 Men/252 Women)	400
EVERGREEN INDUSTRIAL CO., LTD. (Cambodia) Garments	2,100 (1,200 Men/900 Women)	5,000
TIGER WING CO., LTD. (Japan) Shoes	714 (89 Men/625 Women)	800
MINEBEA CO., LTD. (Japan) Small-Sized Motors	1,513 (161 Men/1,352 Women)	5,000
O AND M CO., LTD. (Japan) Leather Products	185 (53 Men/132 Women)	200
MARUNIX CO., LTD. (Japan) Wire Harness Assembly	140 (15 Men/125 Women)	200
ZION LABEL AND PRINTING CO., LTD. (Singapore) Labels	17 (8 Men/9 Women)	18
COMBI CO., LTD. (Japan) Baby Toys and Products	200 (23 Men/177 Women)	260
SOON-WEST CO., LTD. (Japan) Electronics (Part & Product)	240 (129 Men/111 Women)	300
JAPAN ROCK S.E.A CO., LTD. (Japan) Garments	181 (46 Men/135 Women)	500
SUMI WIRING SYSTEMS CO., LTD. (Japan) Automobile Wiring	812 (94 Men/718 Women)	1200
CAMBOX PRIVATE CO., LTD. (Singapore) Plastics	22 (18 Men/4 Women)	35
HARU PHNOM PENH COMIC CENTER (Japan) Comic Books	72 (38 Men/34 Women)	80
Total	6,700	14,243

Source: PPSEZ (2012)

Since the majority of the factories located in the PPSEZ are labor-intensive in their production processes, the main skill areas required for employees fall into the low and medium skill categories. According to the Public Relations Director at the PPSEZ, this includes large numbers of electricians, automotive mechanics, technicians, as well as engineers at the supervisory level. Minebea Company, for example, requires a very large quantity of workers trained in technical and vocational skills for production of small engines. As a relative newcomer to the PPSEZ, they face a major recruitment challenge in scaling up their production. By 2015, Minebea would be employing 20,000 workers and the PPSEZ as a whole is expecting to employ approximately 100,000 workers by that time.

The gap in supply vs. demand for labor in traditionally female-dominated occupations at garment factories is also a notable feature of employment in the PPSEZ. Companies located in SEZs generally have more female-intensive employment compared to other companies operating in the country, making participation in TVET programs by women a particularly important issue for further study.

The recruitment process for companies in the PPSEZ is conducted through the following channels:

1. Direct recruitment at schools, in villages, or at the factory itself;
2. Advertisement of job openings on TV or radio;
3. Advertising assistance from the PPSEZ management company;
4. The National Employment Agency;
5. Private employment agencies to carry out the recruitment.

The productivity of these recruitment approaches depends on the dynamics and availabilities within the labor market. According to the Public Relations Director in the PPSEZ, the immediate concern of potential investors in the Zone would be the availability of a sufficient amount of skilled workers. Some companies, including high profile multi-nationals such as Canon, have decided not to pursue investment at least in part because of such considerations.

In addition to skills requirements, the Cambodian labor market as yet cannot fulfill the minimum educational standards set by some companies in the PPSEZ. Large-scale operations like Minebea Company would like to have normative educational requirements of at least a complete secondary education for their employees. However, the majority of workers employed within the PPSEZ have generally completed only around a 9th grade education. As the employees available within the labor market do not meet the needs of the companies, they are forced to spend significant amounts of time training the workers on basic competencies. Providing reading and writing classes in Khmer are sometimes necessary.



4.3 Labor Supply Available from Local TVET Institutions in Phnom Penh

There are 38 vocational schools operating in Phnom Penh. Most of these institutions are government-run vocational schools, the three largest being the National Technical Training Institute (NTTI), the Preah Kossonmak Polytechnic Institute (PPI) and the National Polytechnic Institute of Cambodia (NPIC). These TVET institutions provided this study with a sampling of the skilled labor supply in Phnom Penh.

4.3.1 National Technical Training Institute

Facilities: NTTI was founded in Phnom Penh in 1999 as a public educational institution under the direction of the Ministry of Labor and Vocational Training (MoLVT). It is located approximately 5 kms. from the city center. The school's physical infrastructure includes 20 classrooms, 4 laboratories, 4 workshops and a job center located in-campus.



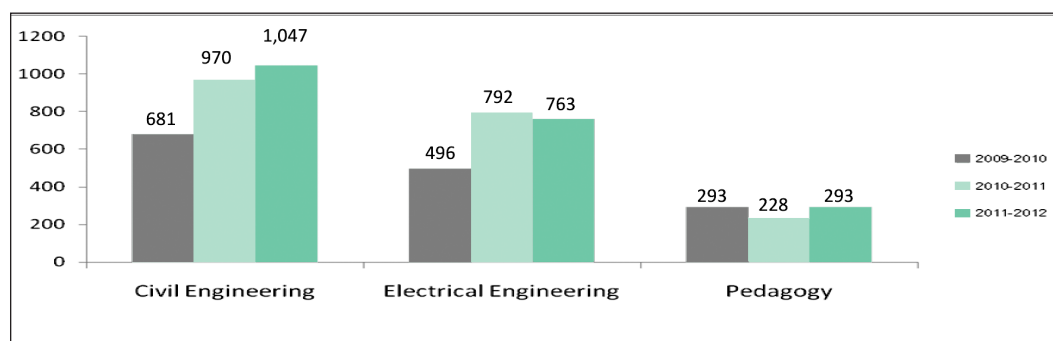
Teaching capacity: NTTI has 67 faculty members, 60% of whom hold master's degree and 25% are bachelor's degree holders. Providing ongoing training in order to upgrade the capacity of the Institute's teaching faculty and to become a center of excellence in teacher training in the region are both part of the core vision for NTTI. The Institute is also offering training in numerous higher skilled competencies and is accredited to award degrees to the master's level.

Curriculum: The Institute's Curriculum Development Office designs the school curriculum. The Office is mandated to improve the Institute's responsiveness to the labor market, providing quality assurance on the delivery of training courses, ensuring that courses delivered are appropriate for the needs of both urban and rural areas, developing and providing curricula and training that prepares school dropouts for productive employment, and promoting linkages and collaboration with both public and private sector employers to promote an increased awareness of the value of training within enterprises.

Enrollment: Some 3,000 students are presently enrolled at NTTI although the figures have been decreasing over the last three years. It is notable that, of the entire enrollment at the Institute, only 20 students are female. NTTI has begun a public relations strategy to increase enrollment through distribution of informational brochures and advertising on local radio and TV stations to promote the Institute and the benefits of pursuing TVET study. Increased outreach activities to overcome some of the entrenched negative attitudes of students and their parents towards studying at TVET institutions instead of at universities are needed.

Matriculation by Subject Area: Civil and electrical engineering are the most popular subjects for study at NTTI, although pedagogy is also well represented because of the Institute's focus on teacher training (see figure 4.2). Apart from the regular courses offered on these subjects, NTTI also provides short-course trainings based upon the specific requests or identified demands of industry. Examples of course offerings include air-conditioner repair, weaving, welding, screen printing, and computer design. A total 725 students completed short-course trainings during the last 3 years.

Figure 4.2: Students Graduating from the National Technical Training Institute by Subject Area (2009-2012)



Source: NTTI (2012)

Links to Industry: NTTI has collaborated with many public and private companies to assist their students with obtaining real world experience in their trades at companies such as AMC, KTC, Kep, K-Cement and others. In addition, the Institute partners with the National Employment Agency (NEA) to connect students at the school with job opportunities in their fields upon graduation.

4.3.2 National Polytechnic Institute of Cambodia

Facilities: NPIC was established in 2005 as cooperative a project between the Government of Cambodia and the Government of South Korea (which provided a soft loan to help fund the Institute). With a total cost of approximately \$27.7 million USD, the project represents a major investment in TVET, with the goal of improving the skills of the Cambodian workforce and contributing to the poverty reduction objectives of the National Strategic Development Plan. The Institute is located about 25 minutes west of the city center and is capable of accommodating the studies of over 20,000 students.

Teaching capacity: NPIC has a total teaching faculty of 123 lecturers. The majority studied internationally at institutions of higher education in Thailand, New Zealand, Indonesia, France, Vietnam, Japan, Singapore, and others. However, an interview with the Vice President of NPIC revealed that the Institute still faces a lack of skilled lecturers in certain fields. NPIC is accredited to provide 4 year (Engineer, Bachelor's) and 2 year (High Diploma) degrees, as well as customized short-course trainings of 3-6 months long upon request.

Curriculum: The curriculum taught at the Institute is determined by its board of directors, which works to make informed decisions based upon a combination of survey of students who have graduated from NPIC and joined the workforce and survey of companies regarding their skills demands. The Institute also accepts requests from companies and organizations to conduct short-course trainings. For example, PPSEZ has contracted with NPIC to provide trainings on general work ethics several times in the past. ILO has also provided funding for a wide variety of short-course trainings at NPIC. A further outstanding feature of the Institute's curriculum is that it is the only TVET institution in Phnom Penh that offers a full-time study option for its students.

Enrollment: There are currently 1,330 students enrolled at NPIC and the figures have been increasing steadily on an annual basis. However, the enrollment of women at NPIC remains low with a total of 85 female students. The Institute has been developing innovative incentive policies to draw the interest of a larger and more diverse group of students including offering free tuition fee for the most outstanding students, 50% discounts in tuition for high achievers, and so on. They also have a well-developed public relations strategy aimed at promoting NPIC which includes producing a wide variety of promotional literature, maintaining a presence at educational fairs, visiting schools across the country, advertising on TV and radio stations, visiting special economic zones, and establishing strong partnerships with government authorities.

Matriculation by Subject Area: Civil engineering and electrician are the most popular subjects for study at NPIC while matriculation in the fields of auto mechanic and air-conditioning repair has been declining. The Institute produced a total of 769 graduates in 2011, with 502 graduating as “applied engineers” and 267 graduating as “applied technicians.” In order to better assess the relevance of the training provided by NPIC, the Institute has started conducting regular employment surveys of graduates and has developed a database to track and analyze the results. The surveys show that 87% of graduates are employed, while 5-8% decided to continue their education and another 5-8% became business owners.

Links to Industry: NPIC partners with both public and private companies to provide students opportunities for practical training in their chosen fields and even collaborates with international universities to send students for further practical training when feasible. The Institute has signed Memoranda of Understanding (MoUs) with Minebea Company, CICG Power Plant, and Gawant Imperial to cooperatively provide the training for low-skilled workers. The direct linkages with large employers in Cambodia such as Minebea also provide increased access to job opportunities for NPIC students. Finally, NPIC also works closely with the NEA and PPSEZ to provide job placement services for graduating students.

International Links: NPIC has a strong international focus and has signed MoUs with many international institutes, universities and organizations. These MOUs provide for educational and research collaborations between the parties, including staff and student exchanges and curriculum development assistance. Notably, this includes such organizations as KOICA, ADB, ILO, UNESCO, UNDP, USAID, and the World Bank, and represents an impressive pool of resources to draw upon in strengthening NPIC’s TVET programs.

4.3.3 Preah Kossamak Polytechnic Institute

Facilities: PPI was established in 1965 to provide technical and business skills in Cambodia. It was granted its status as a public polytechnic institute in 2001. The Institute’s educational facilities include 3 engineering laboratories, 4 computer laboratories, 10 engineering workshops. An interview with the Director of PPI provided the information that most of the equipment at PPI is now quite old and needs to be replaced in order to provide more effective TVET programs.

Teaching capacity: PPI currently has 110 staff, inclusive of the teaching faculty and other staff officers. The educational credentials of these staff members include 1 staff member who holds a doctorate degree, 11 staff members with master’s degrees, 33 staff members with engineering degrees and 49 staff members with bachelor’s degrees. The Director of PPI did state that some of the lecturers in the fields of construction and electrical engineering needed to improve or upgrade their competency levels. To facilitate this, some of these teachers were sent for additional study abroad in Singapore and Japan via JICA funding. PPI is accredited to award degrees to the master’s degree level.

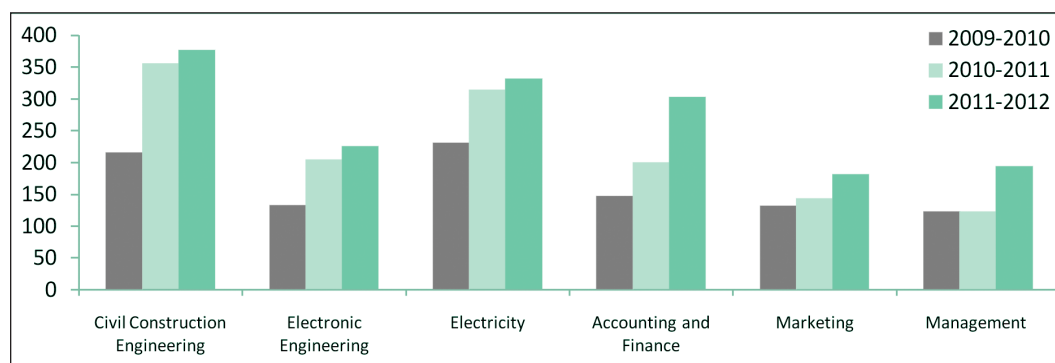
Curriculum: The curriculum taught at the Institute is determined primarily by the MoLVT. However, a project to strengthen the TVET programs at the institute, with funding and technical support provided by the ADB, is currently underway. The project is expected

to provide capacity building to the staff on curriculum reform and skills standardization of civil engineering. The curriculum decisions at PPI are also influenced by follow-up employment surveys of students who have graduated from the Institute, as well as meetings with employers to discuss the quantities of workers and types of skills they require.

Enrollment: In order to increase enrollments at PPI, more than 650 students have been selected for scholarship and this figure is expected to increase to 1,500 shortly. As a measure to expand its enrollment capacity and provide a more flexible training schedule for students, PPI provides 3 separate course schedules each day: morning classes (7:00-12:00), afternoon classes (13.30-17.00) and evening classes (17.30-20.30). PPI has been confronting similar changes in occupational preference as other TVET providers have experienced, with a trend among young people towards pursuing office work as opposed to technical and vocational careers. To address this challenge, PPI has been developing creative promotional strategies and materials that are designed to reach out to their intended target audience. Notably, they have developed a website to attract greater interest in TVET study among young people.

Matriculation by Subject Area: Civil engineering and electrician are the most popular subjects for study at PPI but the number of students in every subject area has been increasing year by year (see figure 4.3). The Institute continues to produce between 800 to 1,000 graduates in technical and business fields every year. Of these graduates, more than 80% were able to find jobs in their fields within 6 months of graduation. Others reported being able to leverage their newly acquired educational credentials into position upgrades with their current employers.

Figure 4.3: Students Graduating from Preah Kossamak Polytechnic Institute by Subject Area (2009-2012)



Source: PPI (2012)

Links to Industry: While PPI does not have a strong link with the management of the PPSEZ itself, they do work directly with companies such as Minebea on providing specific skills training and equipment (in this case for small engine assembly) for the teachers at PPI. Companies like Minebea will then contract with the PPI to send teachers to train their workers.

4.4 Skilled Labor Supply and Demand Mismatch in Phnom Penh Special Economic Zone

According to the figures provided by the PPSEZ, the estimated total number of workers needed by the companies currently in operation within the zone is 14,143. As of May 2012, there were 6,700 workers already employed by these companies, implying a labor gap of 7,443 workers (See table 4.2). On the supply-side of this gap, the study found that the three largest TVET institutions in Phnom Penh are able to produce nearly 3,000 graduates annually.

Although a direct comparison between the number of workers needed by skill area vis-à-vis the number produced by TVET institutions would require a much larger scale study in the context of Phnom Penh's bulky and rapidly shifting labor market, information obtained from interview with key stakeholders suggests that mobilizing this number of workers remains a daunting challenge for the expansion of industrial development in the PPSEZ.

Where the graduates go and why the companies still confront major labor shortages is therefore an important question with no simple answer. In some cases, the students who attend TVET institutes already have jobs and are undertaking further study to advance in their companies. In addition, the jobseekers in the labor market in Phnom Penh now have more options, particularly for those with skills training, due to the expansion of industrial development in the area. Most TVET institutions interviewed found that about 80% of their workers were able to find employment in their fields shortly after graduation. Although interviews with TVET officers showed that some of these students have been employed by the PPSEZ, many of the jobs available are in fact unskilled or low-skilled positions, meaning that workers with technical and vocational skills often find them less desirable.

However, even with these relatively modest skill expectations for the light and medium manufacturing industries that have established factories within the PPSEZ, there are currently gaps that exist. Basic literacy and communication skills in Khmer were cited as a particular challenge for many of the companies. Moreover, according to representatives of the PPSEZ and JETRO, a significant amount of additional Japanese investment is anticipated in the Zone over the course of the next few years. A shift to more value-added production will require an increase in the skill and educational level of the workers available from the labor market in Phnom Penh.

The research identified six key causal factors for the mismatch of labor supply and demand in the PPSEZ:

1. **Increased competition for labor resources:** As mentioned within the introduction, there has been a major expansion of SEZs in Cambodia in recent years. This has meant an increase in the competition for the labor resources needed for labor-intensive manufacturing enterprises. As a large portion of the workers coming to Phnom Penh to work in factories are internal migrants from other provinces of Cambodia, the new SEZs and IPs that have been set up in the border areas with Thailand and Vietnam have reduced the pull factor to migrate to Phnom Penh for work.

2. **Preference for studying academic subjects at universities:** There remains a misperception among students and their parents that vocational training will lead to a career of hard labor and low wages in factories. According to a recent article published by Economics Today however, enrolling in a training course that is strongly oriented toward today and tomorrow's labor market needs will often provide a higher salary than a university degree: "Today, we see that students who have graduated from technical and vocational training courses often get higher wages than university graduates" (Kimsay, 2012).
3. **Low incentives offered for entry-level work in the PPSEZ:** The minimum wage being offered in the PPSEZ in 2012 is \$61 USD/month. As with workers in Laos, the incentives for pursuing TVET study in order to receive starting wages that are significantly lower than those that can be gotten for unskilled employment in Thailand (300 Baht or around \$10 USD) makes the entry-level jobs in the PPSEZ appear less desirable.
4. **Increased expectations for skilled workers:** According to a PR representative interviewed from the PPSEZ, because the operations for labor-intensive factories in Phnom Penh have now been established for many years, and have continued to expand, the expectations for workers have likewise increased. Those with marketable skills may no longer be willing to accept low levels of remuneration and unpleasant working conditions regardless of possessing the skills to do the jobs. In addition, those workers who have bad experiences or who have felt exploited by less ethical companies who did not respect labor standards may decide that agricultural work provides a preferable livelihood option despite the lower earnings offered.
5. **Unavailability of accurate labor market information:** The lack of accurate and updated information on the labor market limits the ability of intermediary agencies to match workers with employers. The initiative started two years ago, with the NEA playing a coordinating role in collecting and disseminating labor market information appears to be providing some assistance with ameliorating the situation. However, the NEA still has significant work to do in consolidating and capitalizing on the database, which will require increased cooperation between stakeholders. At present, the companies in the PPSEZ tend to recruit workers on their own rather than working through the NEA or via partnering with TVET institutions.
6. **Insufficient quality and relevance of TVET:** The quality and relevance of TVET programs in Cambodia certainly appear to be trending upward at many institutions based upon the interviews and site visits conducted during this research. In addition, to further ensure the quality standards of the TVET system, the NTB is planning to set up a 60 member panel of government and private sector experts. These remain nascent efforts in an environment of great need however. Particular attention must be paid to delivering TVET courses that are relevant to the skills now in demand by industry as well as an equitable distribution of TVET resources nationally.

4.5 Conclusion on Labor Supply and Demand in Phnom Penh Special Economic Zone

During a May meeting of ASEAN labor ministers in Phnom Penh, Minister Vong Sauth reiterated that Cambodia must improve the quality of its labor force if it hopes to benefit from the launch of the AEC in 2015 (Kimsay, 2012). While Cambodia's young people are completing more education than ever before, they are frequently not getting trained in the fields that will provide them with the best career opportunities.

To be sure, major improvements in the quality of TVET institutions are currently in progress that show great promise for upgrading the skills and employability of Cambodia's workforce. Connections with international institutes, universities and organizations have provided significant knowledge transfer of good practices to TVET institutions, development of flexible and responsive educational models have allowed for higher enrollments at many institutions, and the growing commitments of international companies, such as Minebea, to assist with the capacity building of their own factory workforce, all represent positive developments for the TVET system in Cambodia.

However, the mismatch between the skills available in the workforce and those most in demand within the labor market remains an intractable problem. Cambodia appears to be approaching a threshold of industrial development, where many of the unskilled and low-skilled jobs offered in factories are no longer considered attractive to young people, while at the same time, sufficiently skilled workers for higher value-added industries remain largely unavailable.

In order to facilitate a better match between the demand and supply for skilled labor in Cambodia, there is a need for additional dialogue and/or intervention on improving labor market information, provision of increased incentives and adequate working conditions for factory employees, dissemination of accurate information about the career opportunities offered by TVET study, equitable distribution of TVET resources between urban and rural areas, and increased cooperative efforts between stakeholders to ensure that TVET programs are relevant to the needs of employers.

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

Several GMS countries suffer from a chronic shortage of qualified workers. This mismatch between the supply and demand of skilled workers with the appropriate education and abilities has expanded as the pace of economic development has increased, emerging as a potential constraint to continuing the growth trajectory of the subregion.

The scale and nature of these gaps between the supply and demand for skilled labor vary considerably within GMS countries and are not as easy to define as a simple lack of skills. This study surfaced the highly complex and contextual character of the existing skills gap, and certainly raises areas for further inquiry that will aid the meaningful responses to national and subregional to labor skills development.

The significance of the current quantitative gap in the demand and supply of skilled labor revealed by the field research in the SSEZ in Lao PDR is relatively minor. Companies operating in the SSEZ require a total of 1,989 workers and 1,734 students graduated from local vocational schools in Savannakhet Province this year. A more meaningful comparison was found in the breakdown by occupational skills, which appear to indicate that mismatches in supply and demand do exist for certain specific skill areas. For example, the number of students who obtain business management and accounting qualifications is nearly double the amount needed within the SSEZ. At the same time, local TVET institutions were able to train an insufficient number of workers to fill such positions as IT or computer operators, maintenance mechanics, welders, sewers/dressmakers, gem lapicides, and others.

Another important concern that surfaced was the labor market's capacity to support the future growth of the SSEZ. As the TVET system in the Savannakhet area already appears to be straining to keep up with the demand for skilled labor, it is unclear how it will be able to meet these needs when the SSEZ reaches full operational capacity during the next 10 years, requiring a total of 5,000 workers. This suggests that a much wider gap between the supply and demand for skilled labor could potentially emerge, threatening the SSEZ's ability to meet its objectives of job creation and improvement of living standards.

Five main causal factors were found for the skills mismatch in the SSEZ:

1. lack of interest in vocational skills training
2. preference for studying business management and accounting subjects
3. low incentives offered for work in the SSEZ
4. unavailability of accurate labor market information
5. insufficient quality and relevance of TVET

The estimated total number of workers needed by the companies currently in operation within the PPSEZ in Cambodia was found to be 14,243. With a current workforce of 6,700 employees in the zone, a labor gap of 7,543 workers was determined to exist. When considered against the training output of the three largest TVET institutions in Phnom Penh, which are able to produce nearly 3,000 graduates annually, the figures suggest that mobilizing this number of workers remains a daunting challenge for the expansion of industrial development in the PPSEZ. According to representatives of the PPSEZ and JETRO, a significant amount of additional Japanese investment is anticipated in the Zone in the next few years such that by 2015, the PPSEZ as a whole is expecting to employ approximately 100,000 workers.

The research identified six key causal factors for the mismatch of labor supply and demand in the PPSEZ:

1. increased competition for labor resources
2. preference for studying academic subjects at universities
3. low incentives offered for entry-level work in the PPSEZ
4. increased expectations for skilled workers
5. unavailability of accurate labor market information
6. insufficient quality and relevance of TVET

Interventions to build the human resource capacity and infrastructure of TVET institutions are clearly needed to progress on skills development in both Laos and Cambodia. Many of the problems faced by TVET systems in these countries are deemed to be heavily influenced by a centralized approach to their design and management and a lack of responsiveness to the needs of the stakeholders. An inclusive approach to TVET reform that is based on broad consultation with government, private sector and worker/student representatives and improved labor market information is an imperative for further development of the system.

This points to the necessity of carrying out further research and dialogue between stakeholders, as well as improving systems for ongoing collection of labor market data, on the particular skills gaps that exist at both country and subregional levels. Developing TVET systems that are appropriate and responsive to the developmental stages of GMS countries and the needs of industry, as well as working towards the establishment of meaningful subregional skill standards, will both require a more evidence-based and participatory policy discourse on skills development.

5.2 Recommendations for TVET Institutions

1. The linkages with international institutes, universities and organizations that have been established by NPIC have provided significant knowledge transfer of good practices for TVET institutions. Increased collaboration and partnership on training, research, and curriculum and institutional development with international actors is an important factor for facilitating capacity building of TVET systems in the GMS.

2. The links to industry need to be strengthened at the majority of TVET institutions in order to increase their relevance. Formalizing partnerships through MoUs with private sector companies in order to provide students with opportunities for practical training in their chosen fields is one such approach. Internships structured with an explicit “*try before you buy*” program arrangement that lead to the possibility of immediate employment after graduation can also provide a clear occupational orientation to TVET study.
3. Regular employment surveys of alumni cohorts who have graduated from TVET institutions should be conducted using a standardized approach so that the results can be shared at national level (and eventually, at regional level).
4. Development of more flexible and responsive educational models have allowed for higher enrollments at many institutions in the GMS. Knowledge sharing of effective models and good practices should be further encouraged.
5. The low-levels of female enrollment at the various TVET institutions researched are a major obstacle to filling the skilled labor gap in the SEZs. The largest gap in supply vs. demand for both SEZs seems to be in traditionally female dominated occupations such as “dressmaker,” “sewer,” and at garment factories. Companies located in SEZs are generally known to have much more female-intensive employment than companies in the rest of their country’s economies, while at the same time have long been criticized for failing to meet labor standards, and particularly, for not appropriately considering the specific needs of female workers. Additional gender disaggregated data should be obtained on enrollment at TVET institutions and employment in the SEZs in order to formulate effective strategies for increasing gender equity.

5.3 Recommendations for the Industrial Sector

1. Companies that are actively engaged and supportive of TVET institutions are likely to receive significant returns on their investments in terms of skilled staffing. Minebea, CIG Power Plant, Gawant Imperial and a few other companies have already successfully initiated these types of strategies by cooperating with local vocational institutes in Cambodia (NPIC and PPI). Through providing equipment and training to these schools, companies like Minebea have been able to establish mutually beneficial relationships which have directly contributed to an improved pool of skilled applicants for their factory positions.
2. TVET training provided by private sector associations such as the Garment Manufacturing Association of Cambodia (GMAC) represents another channel for training of low or semi-skilled workers to meet actual labor market needs. However, such trainings need to be closely regulated by the responsible government authorities in order to ensure that they meet educational standards and do not violate labor protection laws.
3. Increasing the number of students studying at TVET institutions must be a collaborative effort between private and public sector actors. Improved marketing to young people about the opportunities and benefits offered by TVET study should include communications strategies for both TVET providers and employers.

4. The companies in SEZs need to consider offering higher starting salaries and better working conditions for employees if they are to remain competitive in labor markets that are becoming saturated with demand for low-skilled workers. It appears that in both Cambodia and Laos, simply the availability of non-agricultural jobs in SEZs is beginning to no longer be enough to attract the necessary workforce. The minimum wages offered in the SSEZ and PPSEZ are \$70 USD per month and \$61 USD per month respectively. Particularly given that the minimum wage in Thailand is now 300 baht per day (around \$10 USD) for unskilled workers, better incentives will have to be offered to draw in TVET students.

5.4 Recommendations for Government Authorities

1. Interventions to build the capacity and infrastructure of TVET institutions should be supported by broad-based engagement and consultation with government, private sector and workers/student representatives. Additional forums should be held to facilitate an ongoing dialogue between stakeholders.
2. Consider setting up training centers that are based in the SEZs to provide skill training that responds to companies needs directly. Several different models could be used to fund and implement such a center. Thailand has leveraged this approach successfully with the backing of German vocational training institutes. It is likely that international donors, TVET institutions, and the companies operating within the SEZs would be interested in supporting a training center either financially or with technical support.
3. An organization should be established to systematically collect and disseminate accurate and up-to-date labor market information in Laos. Without adequate information on the current state of the labor market and the course of industrial development in the country, designing a TVET system that is responsive to the needs of the labor market remains an obscured target. This should be coupled with strengthening of the 9 employment services job centers which have been established in Lao PDR with sufficient resources and technical assistance to make them fully functional in facilitating a better matching of jobseekers and employment within the labor market.
4. Continue and expand collaborations with international organizations and donors on developing skills testing and certification systems for quality assurance, standardization, and recognition of skills acquired through TVET.
5. There are a number of ILO Conventions that the Governments of Lao PDR and Cambodia could consider ratifying to improve the efficiency of their labor markets. These include the Employment Service Convention, No. 88, the Employment Policy Convention, No. 122 (for Lao PDR), and the Convention on Private Employment Agencies, No. 181.

5.5 Recommendations for Further Research

1. A quantitative survey of students, perhaps including the generation of a decision tree to model the decision making process for studying at TVET institutions, could also provide a significant addition to the evidence base on skills development in GMS countries.
2. National and regional level research is required to provide an indication of the relative strengths, weaknesses, opportunities and threats for each country with regards to skills gaps and TVET systems in order to better identify and prioritize national efforts to address these concerns, as well as to form the basis for subregional intervention strategies.
3. There are often significant differences in what is meant by any given job title between countries (and even intra-nationally between geographic regions). Further qualitative research to answer the question of whether a mechanic who graduates from one of the researched TVET institutions is actually qualified to fill a mechanic position for an international company located in the SEZ is recommended.
4. Carrying out scoping research to identify good practices for increasing the enrollment and relevance of TVET institutions in GMS countries would be beneficial in order to facilitate south-to-south learning and dialogue.
5. The gender inequities in enrollments at TVET institutions have significant implications both for shortages of skilled labor and human resource development of women in the GMS. As firms and SEZs upgrade into higher value-added production, it has been found that the share of females in the labor force tends to decline. Thus, as GMS countries that have maintained traditional labor-intensive, low-skill, export processing zone activities are eventually forced to adjust, it is important to conduct further research on the social and economic impacts that these shifts in production may have, as well as the causal factors for low enrollment of women at TVET institutions in the GMS.

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APPENDIX I: KEY INFORMANTS

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APPENDIX II: MAPS OF SAVAN-SENO SPECIAL ECONOMIC ZONE

Map of Site A: Savan City



Source: SEZA

Map of Site B: Logistic Park



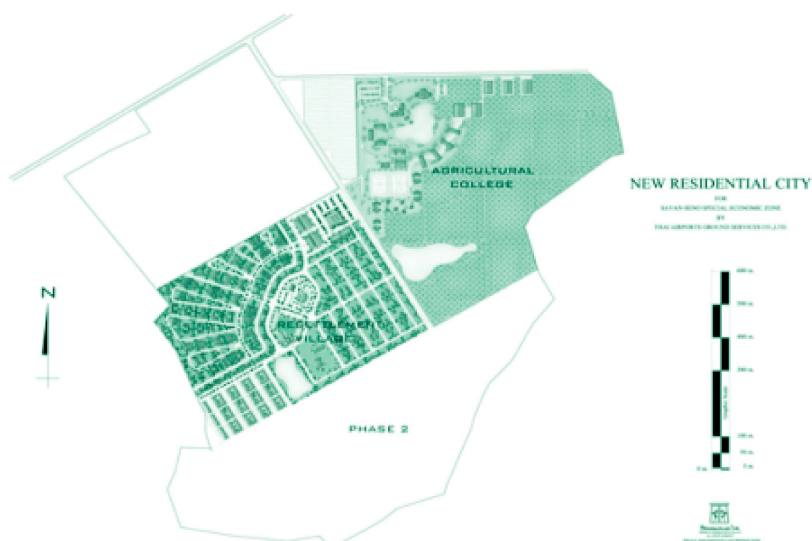
Source: Office of the Prime Minister, Lao PDR

Map of Site C: Savan Park



Source: Department of Domestic and Foreign Investment, Lao PDR

Map of Zone D: Resettlement



Source: Department of Domestic and Foreign Investment, Lao PDR

APPENDIX III: LIST OF BUSINESSES INVESTING IN PHNOM PENH AND SAVAN-SENO SPECIAL ECONOMIC ZONES

Savan-SENO Special Economic Zone

Company Name	Country	Product
1. Savan Pacifica:	Lao PDR/ Malaysia	Construction
2. Lao Tin	Japan	Tin
3. DKLS Properties Development Co., Ltd	Malaysia	Real Estate
4. O.M Laos Co., Ltd	Japan	Real Estate
5. PPSKG Co., Ltd	Lao PDR	Construction Machinery Imports
6. Soukphattana Co., Ltd	Lao PDR	
7. PPS Consulting Co., Ltd	Lao PDR	Legal Consulting
8. Savan Concrete Co., Ltd	France	Cement
9. Ananxay Survey & Design Construction Co., Ltd	Lao PDR	Construction
10. Lao Tin Smelting and Refining Co., Ltd	Japan	Metal Refining
11. Mekong Agro Industry Co., Ltd	Lao PDR	
12. Megatek Co., Ltd	Malaysia	
13. Tee Som Boun Co., Ltd	Lao PDR	Import/Export
14. Mekong Rice Group Ltd	USA	Rice
15. Nanon Logistics Laos Co., Ltd	Thailand	Logistics Services
16. Logitem Lao GLKP Co., Ltd	Japan	
17. Double A Logistic Co., Ltd	Thailand	Paper
18. Hun Ju Green	Korea	
19. Cherry Laos Fashions Co., Ltd	China	Garments
20. OTI Asia Co., Ltd	Australia	Mining Machinery Imports
21. Deuansawanh Co., Ltd	Lao PDR	Logistics Services
22. DIRI Co., Ltd	Holland	Real Estate
23. KCP Trading Co., Ltd	Lao PDR	Import/Export
24. Savan BBK Property Co., Ltd	Lao PDR	Real Estate

Source: SEZA (2012)

Phnom Penh Special Economic Zone

Company Name	Country	Product
Phase 1		
1. Proceeding Phnom Penh Co., Ltd	Japan	Traditional Japanese Clothing
2. Combi Co., Ltd	Japan	Baby Toys and Other Goods
3. Thibidl Co., Ltd	Vietnam	Transformer Assembly
4. Marunix Co., Ltd	Japan	Wire Harness Assembly
5. CKL-Mr. Chia Chor Meng	Singapore	Owner
6. Sin Chn Hong Plastics industrial Co., Ltd	Taiwan	Plastics
7. Sichuan New Hope AgriBusiness Co., Ltd	China	Animal Feed
8. Shin Feng Paper Co., Ltd	Taiwan	Boxes and Paper
9. Zi-Xing Co., Ltd	Taiwan	Boxes and Paper
10. Zion Label and Printing Co., Ltd	Singapore	Labels
11. Medipro(Cambodia)Co., Ltd	Japan	Medical Equipment
12. Khau Kimbac	Cambodia	Rentals
13. CS Telecom & Network	Cambodia	Rentals
14. FSTPP Co., Ltd	Japan	Traditional Japanese Clothing
15. Redian Industrial Co., Ltd	Korea	Garments and Accessories
16. Ms. Ek Erika	Cambodia	Owner
17. Lim Sreypeou and Hiv Kim Heng	Cambodia	Owner
18. Cambodian Success Industries Co., Ltd	Malaysia	Steel
19. KLB Bio-Energy Investment Co., Ltd	Cambodia	Briquettes
20. Yamaha Motor Co., Ltd	Japan	Motorcycles
21. Evergreen Industrial Co., Ltd	Cambodia	Garments
22. Tiger Wing Co., Ltd	Japan	Shoes
23. Liwayway Food Industries Co., Ltd	Philippines	Snack Foods
24. ESURAN Pte., Ltd	Japan	Automobile Parts
25. Ajinomoto Co., Ltd	Japan	Food Products and Seasonings
26. Yi Xiang Co., Ltd	Taiwan	Clothes Hangers & Poly Bags
27. Koh Teak Heat	Cambodia	Owner
28. Sumi Wiring Systems Co., Ltd	Japan	Wiring for Automobiles
29. Clear Circle Co., Ltd	Japan	Shoes

Company Name	Country	Product
30. O and M Co., Ltd	Japan	Leather Products
31. Kyowaseikan Co., Ltd	Japan	Luxury Boxes
32. Atlas ice Co., Ltd	Malaysia	Ice
33. Fontz Power Co.Ltd	Japan	Garments and Bags
34. Cambox Private Co., Ltd	Singapore	Plastics
35. Sunhsin Thread and String Co., Ltd	China	Textiles
36. Bok Seng PPSEZ Dry Port Co., Ltd	Singapore	Shipping
37. Haru Phnom Penh Comic Center	Japan	Comic Books
38. Dishelts Co., Ltd	Japan	Heating and Paint Products
Phase 2		
39. Colbers Energy PPSEZ Co., Ltd	Singapore	Plastics
40. Minebea Co., Ltd	Japan	Small Engines
41. KMG Diamond Co., Ltd		
42. Ms.Vich Hong	Cambodia	
43. Mega Label &Stickers Co., Ltd	Malaysia	Labels
44. Betagro Co., Ltd	Thailand	Animal Feed

Source: PPSEZ (2012)

The Mekong Institute (MI) has been serving the human resource development needs of the Greater Mekong Subregion (GMS) since 1996. The New Zealand Government conceived the Mekong Institute as a development assistance project for the countries of the GMS, intended to evolve into a regionally governed, autonomous institution. The Institute is situated on the campus of Khon Kaen University in Northeastern Thailand, at the heart of the GMS, with its mission “to contribute through human resource development and capacity building to the acceleration of sustainable economic and social development and poverty alleviation in the Greater Mekong Sub-region and promote regional cooperation and integration” (MI Charter 2003).

In 2003, the six GMS governments signed a charter founding the Mekong Institute as “a non-profit, autonomous, international organization, working in close collaboration with other GMS institutions”.

In July 2009, the Thai Government approved the MI Headquarters Agreement in Thailand and recognized the Institute as an “intergovernmental organization of the six GMS countries”.

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