

# LAO DEVELOPMENT REPORT 2014



**Expanding Productive  
Employment for  
Broad-Based Growth**

October 2014



**WORLD BANK GROUP**



# Currency Equivalents

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Currency unit = Lao Kip  
US\$ 1 = 8,000 Kip

# Acronyms and Abbreviations

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ASEAN	Association of Southeast Asian Nations
DEAC	Department of Agricultural Extension and Cooperatives
ECD	Early Child Development
ECE	Access to Early Childhood Education
EDI	Early Development Instrument
EGRA	Early Grade Reading Assessment
ETS	Educational Testing Service
FAO	Food and Agricultural Organization
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
ILO	The International Labour Organisation
IMF	International Monetary Fund
IRRI	International Rice Research Institute
Lao PDR	Lao People's Democratic Republic
LECS	Lao Expenditure and Consumption Survey
LFS	Lao Labor Force and Child Labor Survey
LSB	Lao Statistics Bureau
LSIS	Lao Social Indicators Survey
MDG	Millennium Development Goal
MOES	Ministry of Education and Sports
NSEDP	National Socio-Economic Development Plan
OECD	Organisation for Economic Co-operation and Development
PSE	Producer Support Estimates
STEP	Skills Toward Employment and Productivity
TFP	Total Factor Productivity
TVET	Technical Vocational Educational and Training
UNDP	United Nations Development Programme
WBG	World Bank Group
WTO	World Trade Organization

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The findings and interpretations expressed here are those of the authors and do not necessarily reflect the views of the World Bank Group, its Executive Directors, or the countries they represent.

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Photo by Bart Verweij / World Bank, 2014

# Executive Summary

## KEY MESSAGES

- Although recent media reports of a perceived “skills problem” in Lao PDR have spurred an intense focus on the role of the education sector in creating the right skills, this focus on skills overlooks more fundamental issues that are critical to the future of Lao PDR’s workforce and economy.
- In order to achieve broad-based growth and poverty reduction, Lao PDR must channel greater resources toward tackling key workforce and productivity challenges.
- Given the large majority of the population that is engaged in agriculture, boosting agricultural productivity is a top priority for improving livelihoods and reducing poverty. Higher agricultural productivity will raise farm incomes and will eventually free workers to move to higher-productivity, higher-paying sectors.
- Diversification will be critical for providing better employment opportunities for workers who are released from agriculture. Because the natural resources sector generates few jobs, greater emphasis is needed on creating an environment that helps businesses in the employment-generating manufacturing and services sectors flourish.
- At the same time, workers must be equipped with the basic skills necessary to take up the higher-productivity opportunities that are available. Reforms must focus on expanding early childhood education, ensuring literacy, and building job-relevant technical skills.

## 1. Introduction

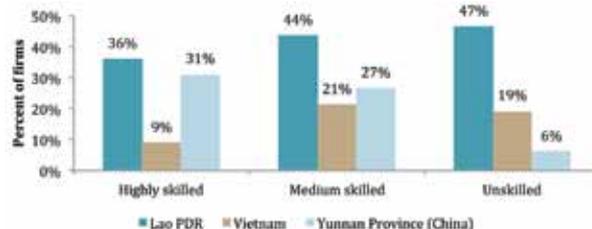
**Recent media reports of a perceived “skills problem” in Lao PDR have spurred an intense focus on skills development initiatives.** Alarming media coverage of rising wages and complaints among firms of a shortage of skilled workers has raised concerns over whether Lao workers are equipped with the skills

sought by firms. The Government and other partners have responded by channeling more resources to skills development, for example with investments in vocational training facilities to train more workers.

**However, this report argues that the workforce problems which Lao PDR faces do not only stem from problems in the education sector.** Looking only to skills development as a solution would not address the fundamental problems constraining economic growth, employment creation, and poverty reduction. Creating an environment conducive for farm and non-farm businesses to make investments and grow remains an essential first step for skills development. As World Bank (2004) states, “Training does not create jobs. Skills are a derived demand and that demand depends on policies for growth and employment creation.”

**One indication of bigger underlying structural problems is that firms complain that not enough workers are applying for jobs, even the low-skilled jobs.** Nearly half of firms in Lao PDR indicated that they had no or few applicants to an unskilled job (Figure 1), a much higher percentage than in neighboring countries. This phenomenon points to troubling workforce issues. Why aren’t people moving to fill vacancies in manufacturing that offer potentially better opportunities? Does Lao PDR lack enough workers, and/or is it a problem of workers lacking the right skills?

Figure 1: Percentage of firms in Lao PDR, Vietnam, and Yunnan province (China) complaining that there were no or few applicants to a job, by skill level



Source: World Bank Enterprise Surveys in Lao PDR, Vietnam, and Yunnan province (China) (2012)

**Tackling key workforce and productivity issues is particularly pressing given that Lao PDR is undergoing a major demographic transition.**

The population is projected to increase by 38 percent from 6.4 million in 2010 to 8.8 million in 2030, with approximately 96,000 additional people reaching working age every year in the coming decade compared to 63,000 in the 1990s. Expansion of the labor force and a decrease in the number of dependents present an opportunity for growth, particularly if Lao PDR can tap the potential of young workers through productive employment opportunities. Without sufficient prospects for employment for these labor force entrants, poverty reduction and stability could be undermined.

**2. Key Challenges**

**A number of key workforce-related challenges must be addressed for Lao PDR to manage its demographic transition successfully and advance to the next stage of development.** These challenges include:

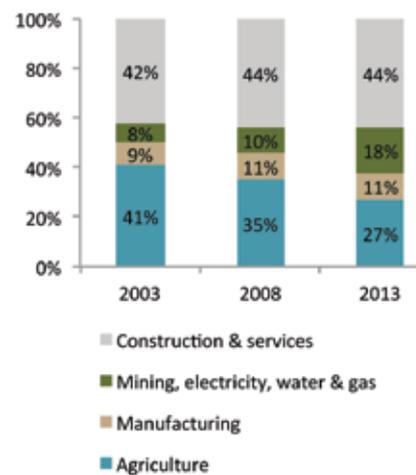
- *Overreliance on the natural resources sector.* While there has been a heavy reliance on the natural resources sector as an engine of growth, it does not create shared growth and employment. Because the sector has a high ratio of capital to labor, it was able to produce approximately 18 percent of Lao PDR’s GDP in 2013 with only 22,000 people. Furthermore, the boom in the natural resources sector makes it relatively more difficult for the nascent manufacturing sector to grow, including by putting upward pressure on the exchange rate which makes manufacturing exports less competitive and by fueling a consumption and investment boom which can put upward pressure on wages. Such upward pressure on wages is one possible reason why manufacturing workers have seen their wages rise by approximately 12 percent per year in the past 5 years, well above labor productivity growth.
- *Low productivity in the agricultural sector.* Because most of the labor force is currently engaged in agriculture, improving livelihoods for those in the sector is critical to reducing poverty in Lao PDR. However, an estimated 7 in 10 Lao workers are still mainly employed in low-productivity

agricultural jobs that keep them on the farm despite lower living standards. This is particularly troubling considering that about 1 million children under the age of 10 live on farms and face dim prospects for breaking out of poverty.

- *Limited opportunities for higher-paying, higher-productivity jobs.* Countries develop by moving workers from low-productivity jobs in agriculture to higher-paying, higher-productivity jobs in manufacturing and services. However, the Lao manufacturing sector appears to struggle to attract workers, and numerous factors discourage the investment necessary to help boost productivity (and therefore wages) in the sector. As illustrated by Figure 2, the share of the manufacturing sector in terms of both output and labor in the overall economy has remained very low relative to the natural resources sector and the construction and services sector in recent years.

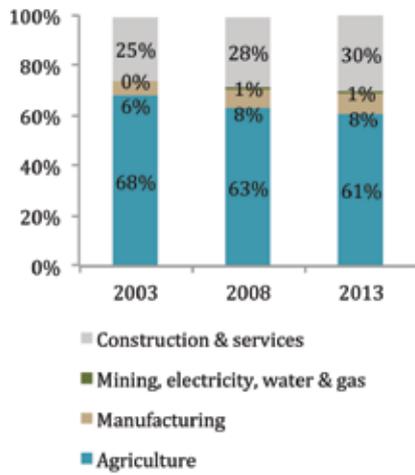
Figure 2: Sectoral breakdown of output and labor in the overall economy of Lao PDR

Composition of economy by amount of output produced by each sector (measured as value-added and expressed in % of total value-added)



Source: National Statistical Center of Lao PDR

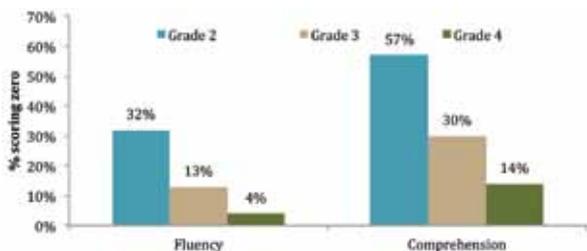
Composition of economy by amount of hours worked in each sector (in % of total)



Source: Authors' calculations based on LECS III, IV and V

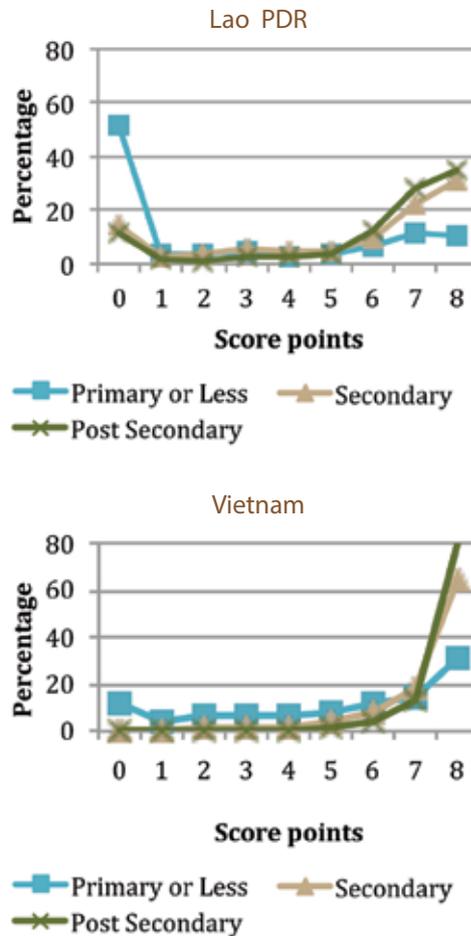
- Very low levels of literacy.* The skills problem in Lao PDR is deeper and more severe than is generally recognized, being a problem not simply of vocational skills but of even basic reading and numeracy skills. An Early Grade Reading Assessment showed that over 30 percent of 2nd graders could not read a single word, and among those who could read, 57 percent did not understand what they had just read (Figure 3). In an adult literacy assessment carried out in six countries around the world—including Vietnam, Yunnan Province (China), and Lao PDR—adults in Lao had the poorest literacy skills among the adults tested. Post-secondary graduates in Lao PDR performed almost on par with people with only primary schooling in Vietnam (see figure 4). Given how important reading ability is for learning more advanced skills, the low level of basic literacy has serious implications for the country's productivity, growth, and competitiveness.

Early Grade Reading Assessment for Lao PDR



Source: World Bank (2014). "2012 Lao PDR EGRA Survey Report" [draft].

Figure 3: Comparison of adult literacy by education level in Lao PDR and Vietnam



Note: Graphs show scores on basic literacy test (from 0-8 points) for adults with different education levels in Lao PDR (left graph) and Vietnam (right graph).

Source: STEP Household survey 2011/2012. Within the survey, there is a literacy assessment designed by Educational Testing Service (ETS).

3. The Way Forward

Given that the majority of the country's workforce is currently engaged in agriculture, raising agricultural productivity is arguably the top development priority for Lao PDR. In the shorter term, higher agricultural productivity will help generate better livelihoods for the 4.5 million Lao people living on farms. Over the longer term, increased productivity on the farms would eventually lower the need for labor, freeing up agricultural workers to move to more productive jobs in other sectors. In particular, greater attention is needed in two areas:

- *Facilitating trade in paddy and rice to encourage private investment in milling, which would help reduce milling costs and give farmers greater incentive to increase production for export;*
- *Making better use of public resources supporting rice farmers, with a more balanced approach in allocating resources for extension activities, technology development and transfer (including good seed), and irrigation.*

As agricultural productivity increases and more workers are able leave farming, the Lao economy will need to generate more attractive off-farm jobs to absorb these workers. Contrary to what media reports might suggest, Lao PDR is not facing a labor shortage, as it has a very large “reservoir” of farm workers that could potentially move to the non-agricultural sectors; rather, Lao PDR has a shortage of attractive job opportunities that make it worthwhile for a farmer to give up farming. To help create more attractive off-farm employment opportunities, barriers to doing business in Lao PDR must be removed to encourage investment and spur productivity growth in diversified sectors. In particular, action is needed on three fronts:

- *Streamlining and simplifying the business compliance and transaction costs associated with dealing with government to create a more business-friendly environment;*
- *Improving transparency in the provision of public sector services to business through measures such as publication of all fee schedules, permits, and licensing requirements; and*
- *Establishing a more predictable playing field for the private sector, with consistent implementation of publicly available legislation, rules, and regulation and with reduced bureaucratic discretion.*

As greater diversification generates more productive employment opportunities, it will be critical to ensure that the Lao workforce is equipped with the knowledge and skills to be able to take up these jobs.

Greater priority should be placed on cultivating a workforce that possesses the basic foundational skills needed to be productive. Resources need to be focused more effectively on the critical windows of opportunity when skills are built by:

- *Expanding and strengthening early childhood development and education to help develop school readiness skills and basic cognitive and behavioral skills, which also includes efforts to reduce chronic malnutrition which threatens cognitive development;*
- *Ensuring that all children can read by the end of grade 2, making reading a national obsession so Lao PDR can build a skilled and productive workforce; and*
- *Building job-relevant technical skills, with the Government taking on a more strategic role in vocational skills development by developing policies, setting standards, investing in training materials and instructors, improving public information about the training system, and carrying out training evaluations.*

In the process of planning specific reforms in these areas, it will be critical for policies to be grounded in better information. For example, policies affecting the workforce should be based on a complete and accurate picture of labor market dynamics—what is happening, who is affected, what the implications of potential policies might be. However, crucial information on sectoral employment, migration, and other labor market indicators are lacking. Instruments such as a labor force survey could help provide essential information for policymakers to understand the key challenges and design appropriate solutions. Further work is also needed to understand the array of factors affecting the workforce-related challenges discussed above, including determining why manufacturing wages have been rising faster than labor productivity and identifying other barriers to worker mobility between jobs and sectors.



# Chapter 1: Overview



## I. Introduction

**1. Recent media reports of a perceived “skills problem” in Lao PDR have spurred an intense focus on skills development initiatives.** Alarming media coverage of rising wages and complaints among firms of a shortage of skilled workers has raised concerns over whether Lao workers are equipped with the skills sought by firms. The Government and other partners have responded by channeling more resources to skills development, particularly for initiatives aimed at aligning skills with employers’ needs. Such measures have included increased investment in vocational training facilities to train more workers, albeit from very low levels of spending.

**2. However, this report argues that Lao PDR’s development challenges stem not only from problems with education and skills but also from the country’s slow structural transformation.** The highly publicized “skills problem” may make it tempting to direct resources toward quick fixes for the problem, for example by expanding vocational education or expanding on-the-job training. The main message of this report, however, is that it would be a mistake to look only to the education sector and more training as a solution because doing so does not address the fundamental problems constraining economic growth, employment creation, and poverty reduction. Creating an environment conducive for farm and non-farm businesses to make investments and grow remains an essential first step for skills development. As World Bank (2004) states, “Training does not create jobs. Skills are a derived demand and that demand depends on policies for growth and employment creation.” Moreover, insofar as improved skills are needed, this report argues that scarce public resources would be better spent addressing serious gaps in basic literacy.

**3. One indication of bigger underlying structural problems is that firms complain that not enough workers are applying for jobs, even the low-skilled jobs.** As shown in Figure 0.1, nearly half of firms in Lao PDR indicated that they had no or few applicants

to an unskilled job, a much larger proportion than in Yunnan province (China) and Vietnam. This phenomenon points to troubling workforce issues. Why aren’t people moving to fill vacancies that offer potentially better opportunities? Does Lao PDR lack enough workers, and/or is it a problem of workers lacking the right skills?

Figure 1.1: Percentage of firms in Lao PDR, Vietnam, and Yunnan province (China) complaining that there were no or few applicants to a job, by skill level



Source: World Bank Enterprise Surveys in Lao PDR, Vietnam, and Yunnan province (China) (2012)

**4. Tackling such workforce issues is particularly pressing given that Lao PDR is undergoing a major demographic transition, which represents both a challenge and opportunity for growth and poverty reduction.** The country has a large youth cohort that is entering adulthood and starting to participate in the labor market (Figure 1.2 and Figure 1.3). The population is projected to increase by 38 percent from 6.4 million in 2010 to 8.8 million in 2030, with approximately 96,000 additional people reaching working age every year in the coming decade compared to 63,000 in the 1990s. Expansion of the labor force and a decrease in the number of dependents present an opportunity for growth, particularly if Lao PDR can tap the potential of this cohort of young workers through productive employment opportunities. Without sufficient prospects for employment for these labor force entrants, poverty reduction and stability could be undermined.

Figure 1.2: Population structure of Lao PDR in 2010

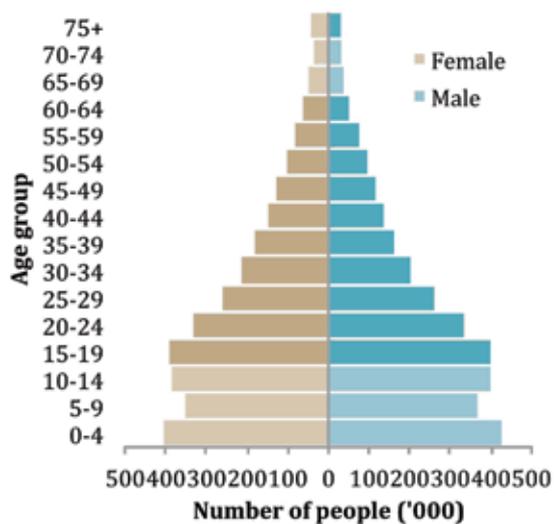
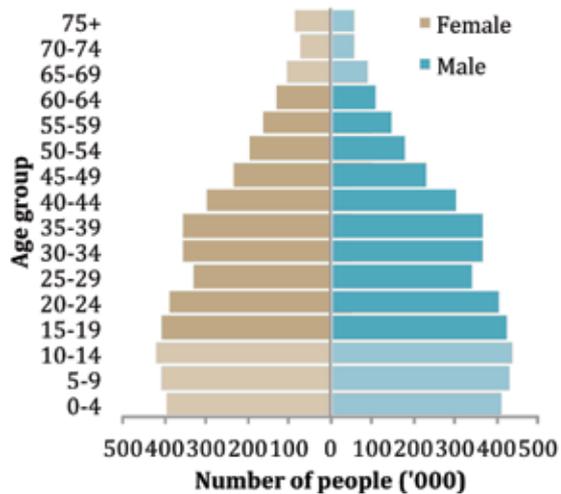


Figure 1.3: Projected population structure of Lao PDR in 2030



Source: United Nations (2013)

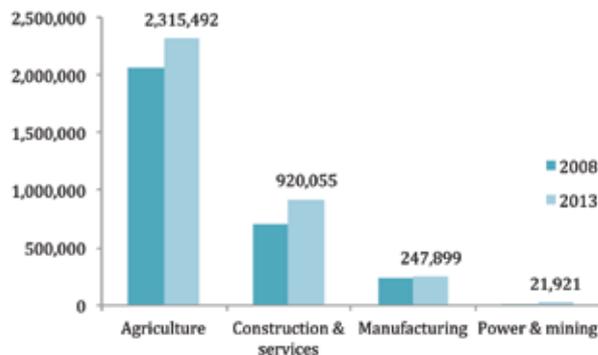


Photo by Bart Verweij / World Bank, 2014

**5. A number of key workforce-related challenges must be addressed for Lao PDR to manage this demographic transition successfully and achieve its growth and development aspirations.** These challenges include:

- *Overreliance on the natural resources sector.* While there has been a heavy reliance on the natural resources sector as an engine of growth, Lao PDR cannot rely on its resources sector alone. Because the sector has a high ratio of capital to labor, it is able to produce approximately 18 percent of Lao PDR’s GDP in 2013 with only 22,000 people (Figure 1.4). Therefore, the sector does not create shared growth and employment.

Figure 1.4: Employment in Lao PDR by sector



Source: Lao Expenditure and Consumption Survey (LECS) IV (2007-2008) and V (2012/13)

Not only does the natural resources sector do little to create jobs, it also makes it relatively more difficult for the nascent manufacturing sector to grow. It does so through a number of channels, including by putting upward pressure on the exchange rate, which makes manufacturing

exports less competitive.<sup>1</sup> It can also fuel a consumption and investment boom which can put upward pressure on wages in the economy. Such upward pressure on wages is likely to be one reason why manufacturing workers have also seen their wages rise by approximately 40 percent in the past 5 years, well above labor productivity growth.<sup>2</sup>

- *Low productivity in the agricultural sector.* Because most of the labor force is currently engaged in agriculture, improving livelihoods for those in the sector is critical to reducing poverty in Lao PDR. However, agricultural productivity remains very low. An estimated 7 in 10 Lao workers are still mainly employed in low-productivity agricultural jobs that keep them on the farm despite lower living standards. This is particularly troubling considering that about 1 million children under the age of 10 live on farms (Figure 1.5) and face dim prospects for breaking out of poverty.

Figure 1.5: Structure of the farm population in Lao PDR



Source: Agricultural Census Office (2012)

<sup>1</sup> The export of natural resources brings a large inflow of foreign currency which drives up the value of the country’s own currency. Appreciation of the exchange rate makes the country’s other exports (mainly, manufactured goods) more expensive for other countries, thus reducing the competitiveness of the country’s exports and hurting domestic manufacturers.

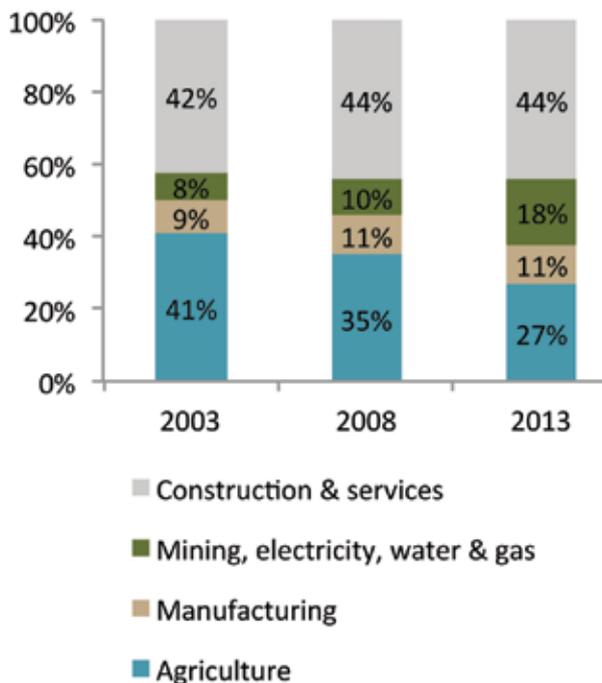
<sup>2</sup> The extent to which the national resource sector has adversely affected other parts of the Lao economy has been studied by a number of different authors, including Mitra (2007) (studying the period 2000-2006), Brahmhatt and Vostroknutova (2010) (studying the period 2000-2009), and World Bank (2014g).

- Limited opportunities for higher-paying, higher-productivity jobs.* Countries develop by moving workers from low-productivity jobs in agriculture to higher-paying, higher-productivity jobs in manufacturing and services. However, the Lao manufacturing sector appears to struggle to attract workers, and numerous factors discourage the investment necessary to help boost productivity (and therefore wages) in the sector. As illustrated by Figure 0.6, the share of the

manufacturing sector in terms of both output and labor in the overall economy has remained very low relative to the natural resources sector and the construction and services sector in recent years. The growth of the services sector while manufacturing firms are facing difficulties is a worrying indication that the manufacturing sector may be suffering from the effects of the natural resources boom as described above.

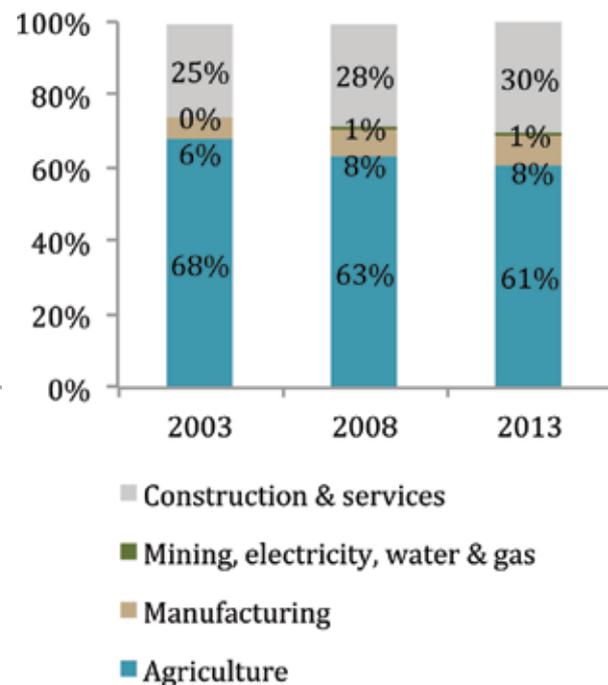
Figure 1.6: Sectoral breakdown of output and labor in the overall economy of Lao PDR

Composition of economy by amount of output produced by each sector (measured as value-added and expressed in % of total value-added)



Source: National Statistical Center of Lao PDR

Composition of economy by amount of hours worked in each sector (in % of total)

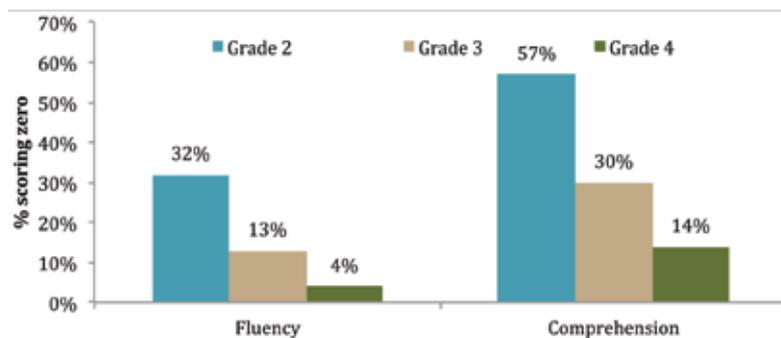


Source: Authors' calculations based on LECS III, IV and V

- *Very low levels of literacy skills.* While higher-paying, higher-productivity employment opportunities may be limited, the workforce also does not appear to be well-equipped to take advantage of the employment opportunities that might be available. The very low levels of literacy skills are particularly problematic. An Early Grade Reading Assessment showed that over 30 percent of 2nd graders could not read a single word, and among those who could read, 57 percent did not

understand what they had just read (Figure 1.7). In an adult literacy assessment carried out in six countries around the world—including Vietnam, Yunnan Province (China), and Lao PDR—adults in Lao PDR had the poorest literacy skills among the adults tested. Given how important reading ability is for learning more advanced skills, this low level of basic literacy has serious implications for the country’s productivity, growth, and competitiveness.

Figure 1.7: Early Grade Reading Assessment for Lao PDR



Source: World Bank (2014e)



Photo by Stan Fradelizi / World Bank, 2011

## II. Overview of Report

**6. This report responds to the growing concerns over the Lao workforce by using new evidence to delve into the fundamental challenges constraining employment and growth in Lao PDR.** In doing so, it aims to help inform two important strategic initiatives that are underway: an update of the Human Resource Development Strategy and preparation of the 8th National Socio-Economic Development Plan. Both of these strategic documents are aimed at ensuring that efforts and resources are targeted effectively at the most critical areas.

**7. The report draws upon a wide range of sources, including new survey data.** Preparation of this report involved a large literature review, analysis of available large-scale household surveys,<sup>3</sup> and commissioning of four data collection exercises: a survey of 3,000 households which included a skills assessment (carried out in parallel with similar assessments in five other countries around the world); a survey of 379 private sector firms, with a particular focus on the skills they seek; a survey of nearly 3,000 recent vocational school graduates; and a survey of 29 education institutions. Six “learning events” were organized with government experts to discuss the findings from each of these surveys. Several background papers providing more detailed analysis were also prepared and shared with government experts.<sup>4</sup> In addition, the report benefited from a new World Bank report on skills in Lao PDR, recent World Bank studies on similar issues in nearby countries, and a newly published regional report on jobs.<sup>5</sup>

**8. The report is structured as follows.** The remainder of Chapter 1 provides a brief summary of the main findings that are discussed in greater detail in the subsequent chapters. Chapter 2 describes the challenges faced in the agricultural sector and suggests some priority areas for improving agricultural productivity going forward. Chapter 3 covers off-farm employment opportunities, with a particular emphasis on creating the preconditions to make the manufacturing sector a potential source of higher-paying, higher-productivity jobs. Chapter 4 addresses the issue of skills, looking across the spectrum of skills and proposing a refocusing of efforts given the particularly low level of basic skills in Lao PDR. Finally, Chapter 5 concludes, reviewing the suggested priority areas for reform and proposing some next steps for further work.

**9. The report argues that the number one priority for Lao PDR is to help improve the livelihoods of its large agricultural workforce by increasing productivity in the agricultural sector.** With 70 percent of its workforce engaged in agriculture, Lao PDR remains primarily an agrarian economy. As discussed in World Bank (2014d), for economies that are categorized as “agrarian,” raising agricultural productivity is the key priority to improve well-being from work (Error! Reference source not found.). In the shorter term, higher agricultural productivity will help generate better livelihoods for the 4.5 million Lao people living on farms. Over the longer term, increased productivity on the farms would eventually lower the need

<sup>3</sup> The labor market analysis for this report relied on the latest three rounds of the Lao Expenditure and Consumption Surveys (LECS3, LECS4, and LECS5) rather than the Lao Labor Force and Child Labor Survey and the Skills Toward Employment and Productivity (STEP) household survey due to shortcomings with those sources, as described in Annex 1.

<sup>4</sup> Annex 2 describes each of the background papers in more detail.

<sup>5</sup> This report draws upon a 2013 technical assessment of skills in Lao PDR (“Skills for Quality Jobs and Development in Lao PDR”) and a 2014 regional report on skills, “East Asia Pacific at Work: Employment, Enterprise, and Well-Being.” Research for this report was undertaken in parallel with work on similar development reports in Vietnam (“Skilling Up Vietnam: Preparing the workforce for a modern economy,” published in 2013) and the Philippines (“Philippine Development Report: Creating More and Better Jobs,” published in 2013) as well as a skills report on Yunnan, China (“Developing Skills for Economic Transformation and Social Harmony in China: A Study of Yunnan Province,” published in 2014).

for labor, freeing up agricultural workers to move to more productive jobs in other sectors. Although the agricultural reform agenda is wide-ranging, this report proposes greater attention to two areas:

- *Facilitating trade in paddy and rice to encourage private investment in milling, which would help reduce milling costs and give farmers greater incentive to increase production for export, and*
- *Making better use of public resources supporting rice farmers, with a more balanced approach in allocating resources for extension activities, technology development and transfer (including good seed), and irrigation.*

**10. At the same time, the creation of attractive off-farm employment opportunities needs to be promoted.** Contrary to what media reports might suggest, Lao PDR is not facing a labor shortage, as it has a very large “reservoir” of farm workers that could potentially move to the non-agricultural sectors; rather, Lao PDR has a shortage of attractive job opportunities that make it worthwhile for a farmer to give up farming. To help create more attractive off-farm employment opportunities, barriers to doing business in Lao PDR must be removed to encourage investment and spur productivity growth in diversified sectors. In particular, action is needed on three fronts:

- *Streamlining and simplifying the business compliance and transaction costs associated with dealing with government to create a more business-friendly environment;*
- *Improving transparency in the provision of public sector services to business through measures such*

as publication of all fee schedules, permits, and licensing requirements; and

- *Establishing a more predictable playing field for the private sector, with consistent implementation of publicly available legislation, rules, and regulation and with reduced bureaucratic discretion.*

**11. The report also argues that to enable workers to take advantage of these opportunities, priority must be placed on ensuring basic literacy skills.**

Greater priority should be placed on cultivating a workforce that possesses the basic foundational skills needed to be productive. Resources need to be focused more effectively on the critical windows of opportunity when skills are built by:

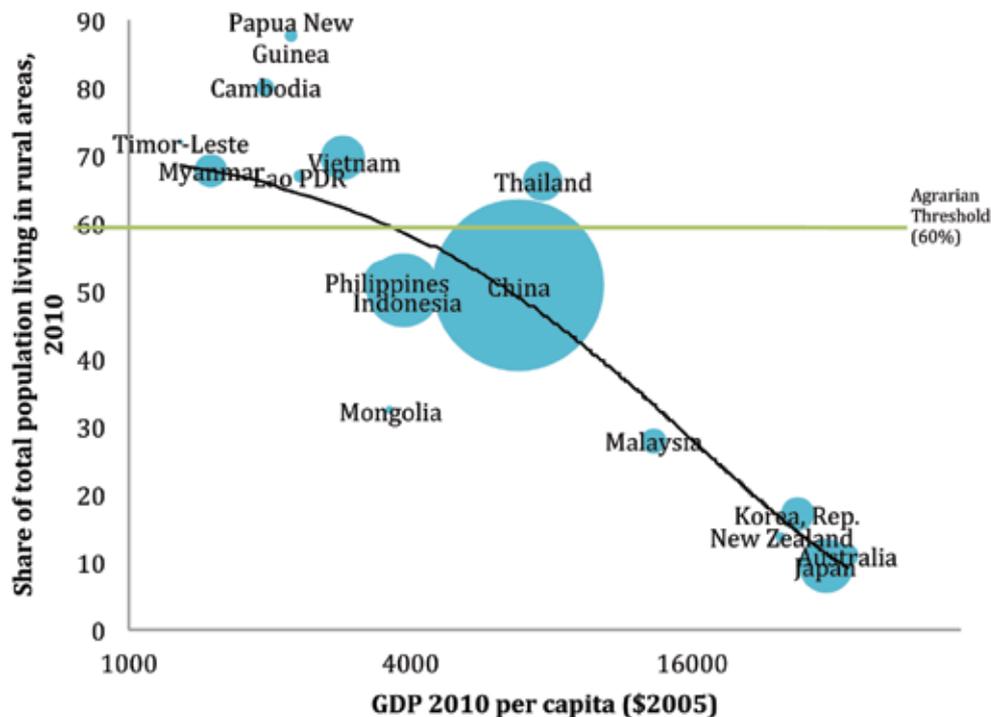
- *Expanding and strengthening early childhood development and education to help develop school readiness skills and basic cognitive and behavioral skills, which also includes efforts to reduce chronic malnutrition which threatens cognitive development;*
- *Ensuring that all children can read by the end of grade 2, making reading a national obsession so Lao PDR can build a skilled and productive workforce; and*
- *Building job-relevant technical skills, with the Government taking on a more strategic role in vocational skills development by developing policies, setting standards, investing in training materials and instructors, improving public information about the training system, and carrying out training evaluations.*

### Box 1.1: The key policy priorities for “Agrarian Economies”

Using a typology laid out in the World Bank’s 2013 World Development Report, World Bank (2014d) proposes a classification of countries in the East Asia and Pacific region to help identify policy priorities for the different types of economies. It uses empirical measures to classify countries into eight different categories: agrarian, conflict-affected, urbanizing, resource-rich, small islands, high youth unemployment, formalizing, and aging. It then identifies and prioritizes the policy challenges in improving well-being from work according to this classification.

Although Lao PDR could be mapped into numerous categories under this typology, given the large share of the population living in rural areas, it is categorized as mainly “agrarian.” An “agrarian” economy is one in which the majority of the population (60 percent or more) lives in rural areas, where work consists mainly of subsistence and small-scale commercial farming and related industries. As shown in the Figure below, other countries in the region that share this classification are Cambodia, Thailand, Vietnam, Myanmar, Papua New Guinea, and Timor-Leste.

Figure: Share of the population living in rural areas, by income level and population size, in East Asia and the Pacific (2010)



As described by World Bank (2014d), for agrarian economies, the policy priority is to raise agricultural productivity in order to free labor to work in rural off-farm enterprises and eventually migrate to urban areas. The most powerful instruments for increasing agricultural productivity and facilitating the structural transition are land reform, agricultural extension programs, deregulation of

prices, rural infrastructure, and good-quality education and health services to build human capital. As workers seek to move to cities, governments should remove policies and programs that restrict working people from moving off the farm and into rural non-farm industry and to manufacturing and services in cities.

Source: World Bank (2014d)



*Photo by Bart Verweij / World Bank, 2013*

**12. Finally, the report reviews the main findings and suggests an overall approach to prioritizing reform measures.**

As mentioned above, raising agricultural productivity is the top priority for addressing Lao PDR's workforce challenges and promoting broad-based growth. As agricultural productivity increases and the cohort of youth entering the labor market grows, Lao PDR will be under greater pressure to ensure the availability of quality jobs. At the same time, firms will be seeking more skilled workers. However, reforms in these areas take time to produce results, therefore these reforms must also be undertaken relatively quickly.

**13. The report also notes that in the process of planning specific reforms, it will also be critical for policies to be grounded in better information.**

Addressing major data gaps is an urgent priority, for example by collecting better information on the employment situation through annual labor force surveys. Further analytical work is also needed to understand the array of factors affecting the workforce-related challenges discussed in this report, including determining why manufacturing wages have been rising faster than labor productivity and identifying other barriers to worker mobility between jobs and sectors.

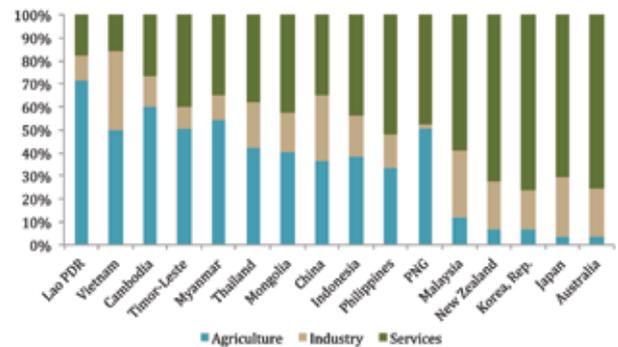
## Chapter 2: Improving Livelihoods through Higher Agricultural Productivity



*Photo by Bart Verweij / World Bank, 2014*

**14. Given that the majority of the country’s workforce is currently engaged in agriculture, boosting agricultural productivity is critically important to improving livelihoods in Lao PDR.** Raising agricultural productivity is a key development priority for Lao PDR, not only for improving incomes for the large rural labor force but also for eventually reducing the need for more labor in the agricultural sector. Workers could then be released into more productive sectors of the economy that offer higher income-earning opportunities and better growth prospects. This chapter provides an overview of the factors that have been constraining agricultural sector development and proposes measures to help increase agricultural productivity going forward.

Figure 2.1: Share of workforce by employment type (circa 2010)



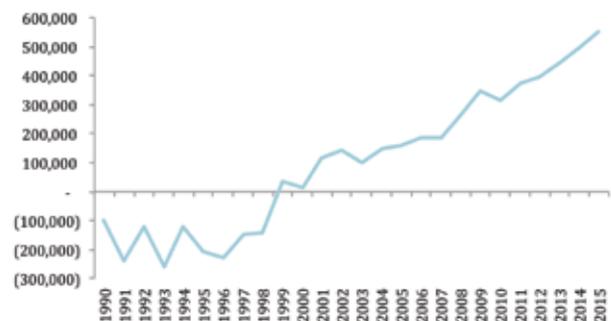
Sources: Data from the World Bank, International Income Distribution Database (I2D2); National Bureau of Statistics of China

## I. Context and Challenges

**15. The agricultural sector—and the rice sector, in particular—has been critical to the livelihoods and food security of the Lao population.** Lao PDR has 2.3 million people engaged in agriculture, representing nearly 70 percent of the country’s workforce and making Lao PDR the most agrarian economy in East Asia (Figure 0.1). Rice is the predominant crop, with 71 percent of all households in the country growing rice in 2010/2011. It has been a key element of food security and has also become an important export commodity for Lao PDR’s trade with Vietnam, Thailand, and increasingly China.

**16. Thanks to expanding production, Lao PDR has achieved rice self-sufficiency at the national level and is building exportable rice surpluses.** Despite some pockets of poor rice availability, Lao PDR has achieved national rice self-sufficiency since the late 1990s (Figure 0.2). Even assuming modest production growth and conservative demographic changes, the exportable surplus is expected to reach 450,000 to 500,000 tons by 2015.

Figure 2.2: Historical and projected rice surplus (tons of raw milled rice) (1990-2015)



Source: World Bank, IRRI, and FAO (2012) (based on data from MAF, NBS data)

### 17. Nonetheless, productivity in the agricultural sector remains very low, and growth over the past decade has been the lowest in the region.

In 2012, average agricultural value added per worker (expressed in 2005 US\$ prices) in Lao PDR was US\$476, lower than in Cambodia (US\$524) and Thailand (US\$1,136). In the rice sector, the low level of farm productivity is due to factors such as poor availability of high-quality seeds and other inputs, poor quality and limited farm advisory services, limited irrigation and drainage infrastructure, and regional differences in social and climactic characteristics (World Bank, IRRI, and FAO, 2012). Low productivity implies that a very large number of workers are needed in agriculture, each producing very little and hence each making only a meager living. At the same time, growth of the sector has been relatively slow. The average per capita annual agricultural growth rate was only 0.8 percent from 2000 to 2012, compared to 2.8 percent in Cambodia over the same period (Figure 2.3).

Figure 2.3: Average per capita annual agricultural growth, 2000-2012



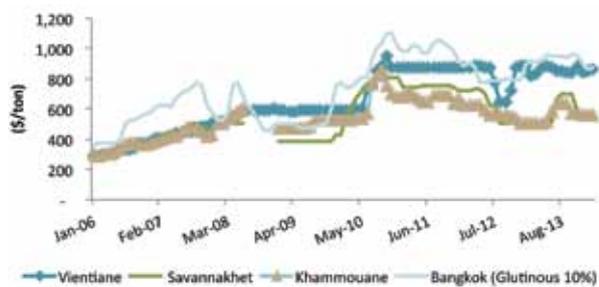
Source: Authors' calculations based on World Bank World Development Indicators

### 18. Lao rice farmers receive low prices for their produce due to numerous factors—including sector policies—which in turn limits profitability.

Although most of the country's rice is glutinous and of higher value than other types of rice, Lao milled rice suffers from low milling quality, making it unattractive to consumers in neighboring countries (and its price lower, see Figure 0.4). Provincial trade bans and price ceilings as well as export restrictions also push down farm prices. Another reason for low prices is that the costly infrastructure increases marketing

costs and reduces the derived prices to farmers. High marketing costs also increase the prices of inputs, further reducing profitability.

Figure 2.4: Glutinous rice prices in Lao PDR and Thailand, 2006-2013 (\$/ton)



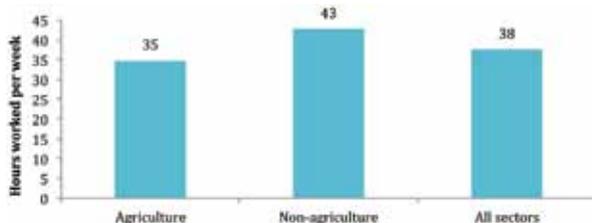
Note: Prices for Lao PDR are for second-quality glutinous rice, retail prices. Prices for Thailand are the export prices of glutinous 10% rice in Bangkok.

Source: FAO (GIEWS)

### 19. Notably, evidence indicates a higher degree of underemployment in the agricultural sector compared to other sectors.

Farm work is seasonal and does not usually provide "full-time" work: only 11 percent of farmers report working 9-12 months per year on the family farm, while 45 percent work for only 3-6 months (Agricultural Census). Caring for livestock usually requires less than an hour a day. A sectoral comparison of hours worked per week also shows that agricultural workers spend less time working than their counterparts in non-agricultural sectors (Figure 2.5). This evidence suggests that a large share of the agricultural workforce could potentially supply more labor and produce more (World Bank, 2013c).

Figure 2.5: Sectoral comparison of average hours worked per week in Lao PDR (2013)



Source: LECSV (2012/13)

## II. Current Government Approach

**20. Multiple national development policies and strategies have emphasized the importance of agriculture and rice, in particular, for food security and economic growth.** Rice has been a top priority for the Government since the country's first National Socio-Economic Development Plan (NSEDP). As described in World Bank, IRRI, and FAO (2012), three main policy documents outline the current objectives and strategic framework for the rice sector in Lao PDR: (i) the Political Report of the 8th Party Central Committee to the 9th Party Congress in 2011; (ii) the 7th NESDP; and (iii) the Agricultural Development Strategy and the associated Agricultural Master Plan. The Political Report to the 9th Party Congress, for example, recognizes the importance of agriculture and forestry as "a fundamental sector of our national economic structure" and calls for a fundamental transformation of the rice sector to modernize it and make it more productive and market-oriented.

**21. Certain policy measures have helped foster greater farm commercialization and improved production to some degree.** Such measures have included the introduction of the first improved seed varieties in the 1970s and the loosening of price controls in the early 1980s, which resulted in improved incentives for producers. Production has become more market-oriented, with 71 percent of households selling some produce in 2010/2011 compared to only 35 percent in 1998/1999. Greater use of com-

mercial inputs has also contributed to a slight rise in productivity. Around 42 percent of farmers in 2010/2011 used improved seeds and chemical and organic fertilizers, compared to 1989/1999 when 30 percent of farmers used improved seeds, 29 percent applied chemical fertilizers, and 34 percent applied organic fertilizers (Agricultural Census, 2012). From 1988/1989 to 2010/2011, the proportion of farmers owning two-wheel tractors increased from 7 percent to 34 percent, while the proportion using tractors increased from 20 percent to 61 percent.

**22. However, government policies restricting trade have constrained development of the agricultural sector.** As described in World Bank, IRRI, and FAO (2012), rice exports are subject to many restrictions, while the export of paddy is subject to re-occurring temporary bans. Trade relationships are unstable because restrictions are applied without advance notice at the central and provincial level. Rice is exported to Vietnam and Thailand on an informal basis but in small quantities and at high cost, bringing little money to Lao farmers. While public expenditures in irrigation, roads, agricultural research, extension, and other public goods try to increase farm incomes, they bring small gains compared to the losses generated by the inward-oriented trade policy, as shown in Table 0.1.

Table 2.1: Producer support estimates for Lao glutinous rice (Kip billion)

	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11
Price support (+)/taxation (-)	-332	-2,373	-840	619	-1,703	-3,141
Agricultural budget transfers	32	45	63	74	70	74
Net Producer Support Estimate	-300	-2,328	-777	694	-1,633	-3,067

Note: Price support is the difference between the average domestic farm-gate prices in Lao PDR and reference border prices in Thailand for the comparable paddy quality.

Source: World Bank, IRRI, and FAO (2012)

**23. The large agricultural concessions, which have increased in number significantly since the early 2000s, cannot replace an increase in the agricultural productivity of smallholders.** In 2009, about 1.1 million hectares was estimated to be managed by the economic land concessions, with the number of agricultural concessions reaching about 1,700 (Schoenweger et al., 2012). While there are many complaints that they do little to create jobs, they also do not seem to encourage farm labor to migrate for non-farm jobs and to produce spillover effects to smallholders, for example through technology transfer. The traditional farm sector remains the largest employer in Lao PDR, and unless the productivity and profitability of this sector are improved, the labor market will continue to be harmed by the low outflow of farm labor.

### III. Recommendations

**24. Although the agricultural reform agenda is wide-ranging, this report identifies two areas that are critical for addressing the constraints Lao farmers face in expanding production.** As this report is primarily concerned with workforce-related issues, it focuses on two reform areas that can help raise productivity and increase profitability in the rice sector.<sup>6</sup> Such reforms would help improve the livelihoods of the large proportion of the population engaged in rice farming as well as free up labor to move into higher-productivity sectors.

**25. Although these recommendations focus on the rice sector given its current predominance, gradual diversification will be needed to maintain higher agricultural productivity and profitability over the longer term.** Helping Lao rice farmers slowly diversify into high-value rice production or other crops will help ensure their longer-term profitability. Therefore, public investments in agriculture should eventually follow a more comprehensive agricultural development strategy, moving away from commodity-specific programs toward public investments tar-

geting poor farmers rather than crops. It will also be important to support rural infrastructure improvements from which all crop production would benefit.

*Facilitate trade in paddy and rice to encourage private investment in milling*

**26. One key priority is to encourage private investment in milling by facilitating trade in paddy and rice.** The vast majority of commercial mills in Lao PDR are small and operate with obsolete milling equipment. They require investments to reduce milling costs to the levels observed in Thailand and Vietnam, in order to pay higher prices to farmers for their paddy. The experiences of neighboring emerging rice exporters show that an open trade policy provides a very strong incentive to invest in the milling industry to benefit from new market opportunities.

**27. The Cambodia experience illustrates how dramatically rice and paddy exports can increase under a more open trade policy, with tremendous impacts on growth and poverty.** Cambodia's open trade policy allows farmers to sell both paddy and rice across the border and outside of the region without any restrictions. In response to these incentives, paddy production has increased by 6 percent annually in the last five years. In 2013, Cambodia exported 1.6 million tons of paddy (in milled equivalent) to Vietnam and Thailand, compared to only 0.1 million tons in 2008 (World Bank, 2014b). This paddy is being milled outside of Cambodia due to cost advantages in Vietnam and Thailand, but at the same time, the country's open trade policy has also stimulated private investment in the milling industry. Knowing that rice exports would not be restricted, milling and polishing capacity in Cambodia increased seven-fold between 2009 and 2013. Thanks to these private investments in the milling industry, farmers increased production of aromatic paddy, and exports of this high-value rice jumped from 12,600 tons in 2009 to 378,800 tons in 2013. Box 2.1 describes the dramatic impacts of such government policies in stimulating economic growth and poverty reduction in Cambodia.

<sup>6</sup> A more comprehensive reform agenda for the rice sector is provided in World Bank, IRRI, and FAO (2012).

**28. Because Lao PDR has moved from having a rice deficit to a sizeable rice surplus and since rice shortages as a source of food security are becoming an increasingly localized phenomenon, the Government should stop imposing temporary export restrictions.** Glutinous rice is in demand in neighboring countries, and Thai, Vietnamese, and Chinese traders have expressed interest in importing Lao glutinous paddy, which could be milled more cost effectively in their countries and sold on domestic or international markets. However, without a consistent export promotion policy, lower milling costs, higher paddy production, and increased agricultural productivity are unlikely.

**29. Why focus on improving the productivity of rice production, not agricultural productivity more broadly?** Although improved productivity is

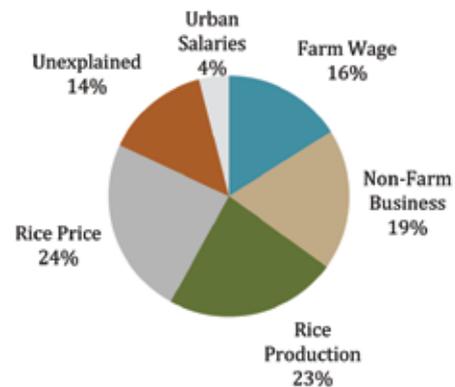
needed across the agricultural sector, the priority at Lao PDR's current stage of development should be to improve the productivity of rice for a number of reasons. First, the rice planting areas in wet season account for 57 percent of total agricultural area, according to the 2011 Agricultural Census. Rice accounts for the large share of farm incomes, with nearly all farms producing paddy. Thus, while all agricultural sectors should be developed and there are many market opportunities, without addressing low rice productivity, it will be difficult to raise average agricultural incomes. Second, if rice productivity remains low, farmers will continue to use most land for rice which will hamper crop and livestock diversification, particularly in low-land areas.

**Box 2.1: Stimulating economic growth and poverty reduction through rice policies in Cambodia**

Cambodia achieved remarkable growth and poverty reduction from 2004 to 2011, thanks in large part to rice sector policies. In that seven-year period, Cambodia's per capita GDP (in constant 2000 US\$) grew 54.5 percent, ranking 15th among 174 countries. Moreover, this growth was pro-poor, with a dramatic drop in the poverty rate from 52.2 percent in 2004 to 20.5 percent in 2011.

Poverty reduction was concentrated in rural areas (where 90 percent of Cambodia's poor reside) and was driven by rice farming. From 2004 to 2009, the price of rice (in constant value) increased by 37.1 percent, boosting farm incomes and providing incentives for higher production. As shown in the Figure below, the substantial increase in rice prices and increased rice production were the two most significant drivers of poverty reduction over this period. Better rural wages and improved income from non-farm self-employment also contributed to poverty reduction.

Figure: Drivers of Poverty Reduction, Cambodia 2004-11



Source: Based on simulations conducted for World Bank (2013g) (see details in Annex 3 of that report)

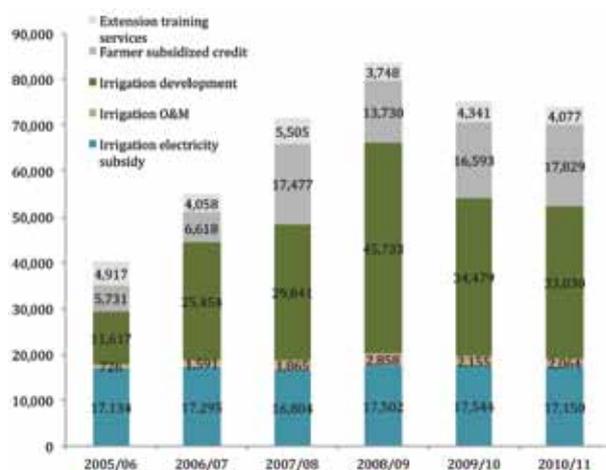
The Cambodia experience provides a powerful example of how government policies can enhance opportunities for households to pull themselves out of poverty. Government policies on rice production (no price controls and no taxes); basic infrastructure improvement (roads, communication, rural irrigation); minimum wage in apparel manufacturing; and overall industrial policy provided the right environment for the poor to take full advantage of favorable conditions.

Source: World Bank (2013g)

*Make better use of public resources supporting rice farmers*

**30. The highest value from agricultural public expenditures is in reducing production costs to help farmers increase their incomes and expand production.** Investments in irrigation (a focus of the current agricultural budget) help to do that, but more needs to be spent on other public goods (Figure 0.6). In this respect, a more balanced approach is needed in allocating scarce public resources among investments in extension activities, technology development and transfer (including good seed), and irrigation.

Figure 2.6: Evolution of budget transfers to rice producers (in constant 2011 Kip million)



Source: World Bank, IRRI, and FAO (2012).

**31. Simulations indicate that although irrigation investments are important, the highest incremental production volumes and returns on public spending come from “best practice” extension packages** (World Bank, IRRI, and FAO, 2012). Investments in irrigation should go hand-in-hand with farm advisory services that transfer technology and market knowledge to farmers for higher and sustained productivity. The Lao Extension of Agriculture Pro-

ject, which helped farmers raise rice yields by 43 percent, provides many lessons on how more and better advisory services can be delivered.<sup>7</sup> In particular, appropriate research and technology development are needed for seed production and management systems and to understand and address factors that limit rice yields. Extension efforts should also be aimed at farm mechanization and reduction of post-production losses. These efforts need to be underpinned by focused and sustained capability building programs.

**32. Training the next generation of rice scientists and agricultural extension practitioners should be given high priority.** Currently, extension support is limited by the current capacity of the Department of Agricultural Extension and Cooperatives (DEAC) in terms of number of staff, their training, and their incentive structure. DEAC is also under-funded, with little operational funds available to field staff outside of donor-financed projects. To ensure effective extension support, greater resources should be channeled to training future rice scientists and agricultural extension practitioners and providing adequate resources for frontline extension staff. Innovative approaches such as the use of non-governmental service providers should also be considered to scale up extension investments.

**33. In addition to functioning extension services and access to fertilizer, a key component of the investment package is availability of good-quality seed.** A basic requirement for enhancing and sustaining rice production is the development, testing, and adoption of high-yielding and high-quality rice varieties for the major rice ecosystems of Lao PDR. Systematic evaluation, testing, and release procedures must be in place, with the continued production and wide distribution of new and better rice seeds to ensure that they reach the most farmers when needed. Support for public sector seed production should be supplemented by strong private sector investments.

<sup>7</sup> More information about this Swiss-financed project can be found at <http://www.laoex.org/LEAP.htm>

## IV. Conclusion

**34. Undertaking the proposed measures to boost agricultural sector productivity will help ensure a better future for the almost 1 million children under the age of 10 living on farms.**

Because agricultural products have a high labor content (unlike minerals or hydropower), raising productivity in the agricultural sector can have a real impact in improving livelihoods. Higher incomes can help break the cycle of poverty for the large number of poor households engaged in farming.

**35. Improving the productivity and profitability in the agricultural sector is also important for Lao PDR's economic transformation.**

Although media reports may suggest otherwise, Lao PDR's growth is not constrained by a labor shortage. Instead, the problem is that a large proportion of the Lao work-

force has been trapped in lower-productivity farming jobs, and their movement into more productive non-agricultural jobs is needed to help the country advance to the next stage of development. Virtually all economies worldwide started out as mainly agricultural and became less so over time. Historically, the share of agriculture in the economy fell as greater wealth, technological innovations, and connections through trade allowed diversification and structural change. This transition out of agriculture works best when supported from both ends: by rising productivity in the agricultural sector which allows the sector to gradually release workers to other sectors and by a growing, employment-generating non-farm sector that can attract and absorb additional workers, as discussed in Chapter 3.



*Photo by Bart Verweij / World Bank, 2014*



## Chapter 3: Expanding Employment Opportunities for Lao PDR's Growing Workforce

**36. While agriculture will continue to be important to Lao PDR for some time, expanding the manufacturing and services sectors is crucial for offering workers better job opportunities as well as for promoting more broad-based economic growth.** As discussed in Chapter 2, the economic development path usually involves a shift from agriculture toward “modern” sectors which offer greater earning opportunities. As agricultural pro-

ductivity increases and more workers are able to leave farming, the Lao economy will need to generate more productive employment opportunities to absorb these workers. Error! Reference source not found. describes the experience of Vietnam, where the movement of workers from low-productivity to higher-productivity sectors—supported by both “push” and “pull” factors—has been a key engine of economic development for the past two decades.

#### Box 3.1: The Movement of Workers from Low-Productivity to Higher-Productivity Sectors in Vietnam

Vietnam’s rapid economic growth over the past two decades has been accompanied by a dramatic shift of workers from the low-productivity agricultural sector to the higher-productivity services and manufacturing sectors. Vietnam started as a highly agrarian economy, with agriculture accounting for 73 percent of total employment in 1990. By 2008, the employment share of agriculture had fallen drastically to 54 percent, while the employment share of services grew from 18 percent in 1990 to 32 percent in 2008, and the employment share of manufacturing grew from 8 percent to 14 percent. This movement of workers made a significant contribution to growth over this period: McCaig and Pavcnik (2013) estimate that this movement accounted for 38 percent of growth in aggregate labor productivity, which grew by an average of 5.1 percent annually during this period.

A number of “push” and “pull” factors supported this movement of labor out of agriculture. In the late 1980s, Vietnam implemented a package of policies (known as

Doi Moi) which involved sweeping reforms in agriculture, the enterprise sector, and international integration. A mix of agricultural reforms (including the lowering/removal of restrictions on trade in rice) contributed to increased agricultural labor productivity and a dramatic expansion in rice production. It appears that Vietnam’s agricultural productivity reached a sufficiently high level for agriculture to exceed the subsistence level and release labor to more productive sectors. At the same time, reforms in the enterprise sector (including the liberalization of FDI and reforms that dramatically improved the business environment) likely contributed to productivity gains in the non-agricultural sectors which helped pull agricultural labor to non-agricultural activities.

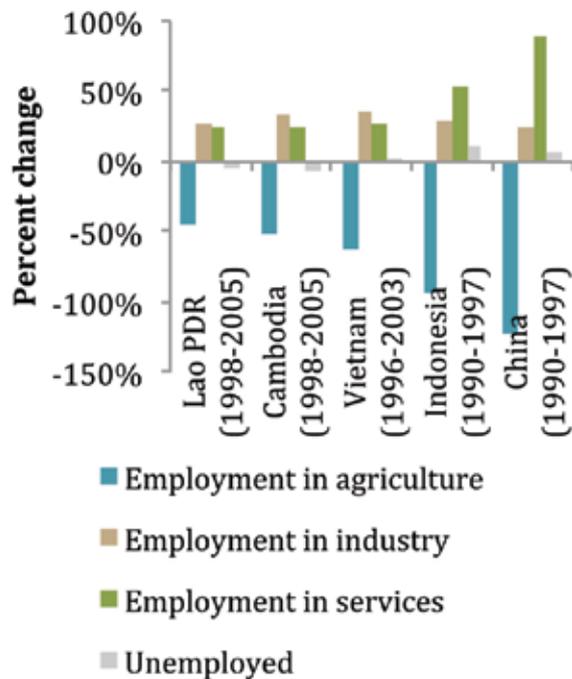
*Source:* McCaig and Pavcnik (2013)

**37. However, the current reliance of Lao PDR on its natural resources sector, which generates few jobs, runs the risk of not being able to provide sufficient employment opportunities.** This has implications for the Lao workforce as well as the country's longer-term growth prospects. This chapter focuses on the need to create a more vibrant economy beyond hydropower and mining, in particular by stimulating growth and investment in broader areas of manufacturing and services that could offer employment to a larger number of people.

## I. Context and Challenges

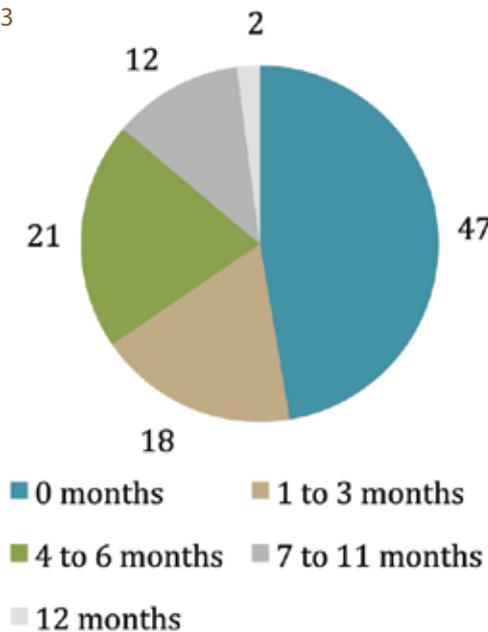
**38. The movement of workers out of the agricultural sector has been slower in Lao PDR compared to neighbors at the same level of development.** As discussed earlier, Lao PDR remains the most agrarian economy in East Asia so has the largest "reservoir" of workers that could be released into the non-agricultural sectors. However, as illustrated by Figure 0.1, the movement of workers from farms into sectors that provide greater earnings potential appears to be relatively slow. Even when workers do leave agriculture for manufacturing jobs, only 47 percent of them give up on farming (Error! Reference source not found.).<sup>8</sup>

Figure 3.1: Country comparison of changes in employment by sector



Source: WDI and WDR<sup>9</sup>

Figure 3.2: Number of working months in farming in the last 12 months (manufacturing sector workers) in 2013



Source: LECS V (2012/13)

<sup>8</sup> Interestingly, a much larger proportion of workers who leave agriculture for service sector jobs gives up farming: 71 percent of service sector workers reported doing no farming in the past 12 months.

<sup>9</sup> The figure plots the "mix change" by sector of activity (and unemployment) by country, based on shift-share analysis. The "mix change" represents by how much employment in a sector or unemployment would have changed if the total increase in the labor force had been zero. It is expressed here as a percentage of the total change in the labor force for comparability over time and across countries. Countries are compared at the same level of GDP per capita whenever data on employment by sector and unemployment are available. A seven-year interval was chosen so as to maximize the duration of the period for Indonesia, for which the earliest data point is 1990, while avoiding the disruption due to the 1997-1998 East Asian crisis. Thailand was excluded because the earliest available data point is 1990, whereas by 1966, Thailand had reached the same level of GDP per capita as Lao PDR in 2005.

**39. Manufacturing and service sector firms often complain that there are no applicants even for low-skilled jobs, despite the possibility of higher earnings from moving out of agriculture.** The agricultural sector provides the poorest earnings possibilities of all the sectors. In 2013, a secondary-educated agricultural worker (whose educational background would conceivably be useful for finding employment

outside of the agricultural sector) earned approximately 4,100 kip per hour in agriculture (Figure 0.3). By moving to the non-agricultural sector, the worker would almost double his or her salary (earning 7,450 per hour). Similarly, workers with tertiary education earned an average of 6,911 kip per hour in agriculture, compared to 7,970 per hour in industry and 9,574 per hour in services.

**Box 3.2: The bureaucratic barriers to moving internally are high**

These articles are from the ministerial decision on migration (dated September 14, 2012). Given how cumbersome the procedures are, it is easy to imagine that a farmer interested in moving to the city would either give up or decide to move illegally.

**Article 7: Procedures for migration**

(Sub-section 7.1 refers to “migration between villages within the same district,” while Sub-section 7.2 refers to “migration between districts within the same province”)

**Sub-section 7.3: Migration between provinces**

- Individuals or families wishing to migrate must submit a letter of request to the village authority, then the request must be considered by the District Office of Home Affairs of the new district. Then the request must be submitted to the Provincial Department of Home Affairs of the new residential location within 7 official working days (starting from the date of receiving the request).
- After receiving a letter from the District Office of Home Affairs, the Provincial Department of Home Affairs of the new province must consider and give an answer on whether to receive or not within 15 official working days (starting from the date of receiving the request).
- Upon approval given by the governor of the new province, migration documents must be obtained from the village, District Office of Home Affairs and Provincial Department of Home Af-

fairs of the province of original residence. After that, an approval must be obtained from the governor of the original province. Then the actual migration can take place.

- The Provincial Department of Home Affairs of the new location must inform the provincial police office within 15 days to change the family book.

**Article 8: Migration Request Documents**

The documents to be obtained from the village of new residence include:

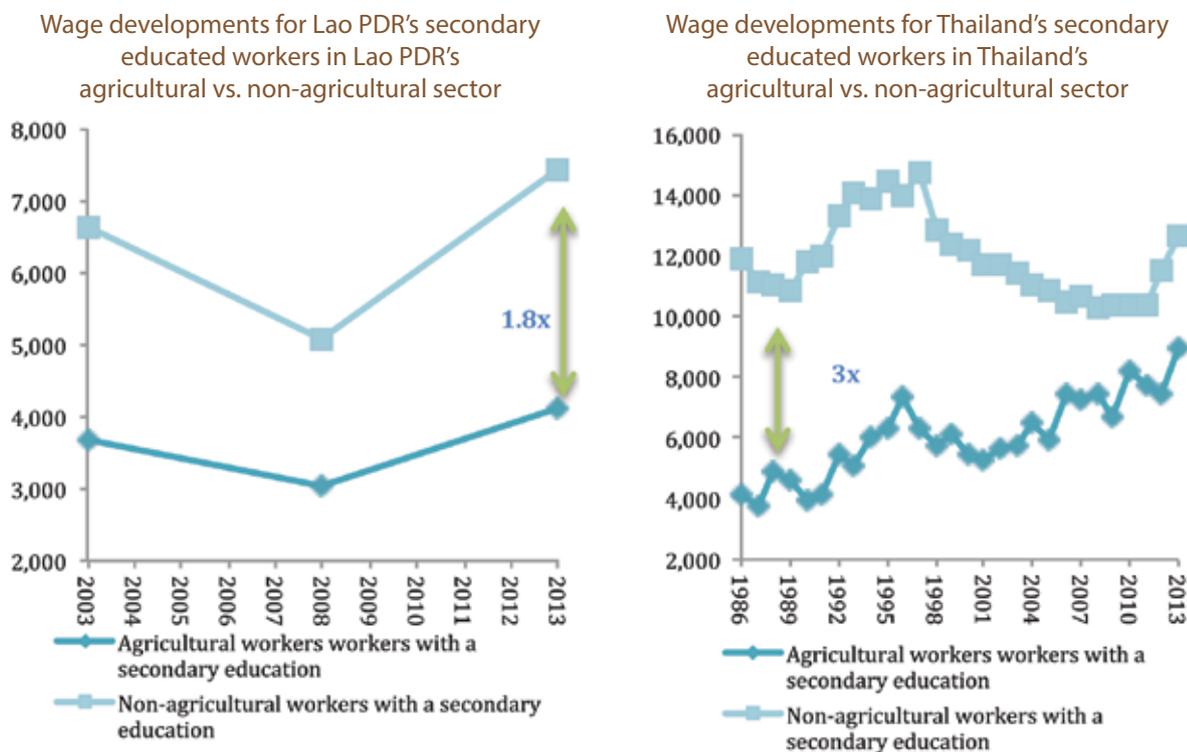
- Letter of request for migration,
- Certificate of residence,
- Family registry book and ID card,
- Personal biography,
- Letter of criminal record, and
- Other documents supporting the reason for migration.

The documents to be obtained from the village of original residence include:

- Approval of acceptance from the village chief, district governor, provincial governor or major of the new residence;
- Approval for migration from village chief, district governor, provincial governor or major of the original residence;
- Health check-up certificate; and
- 6 photos 3 x 4 cm in size.

Source: Unofficial translation of Articles 7 and 8 of Ministerial Order No. 633

Figure 3.3: Wage developments in agricultural vs. non-agricultural sector in Lao PDR and Thailand (for workers with a secondary school education)



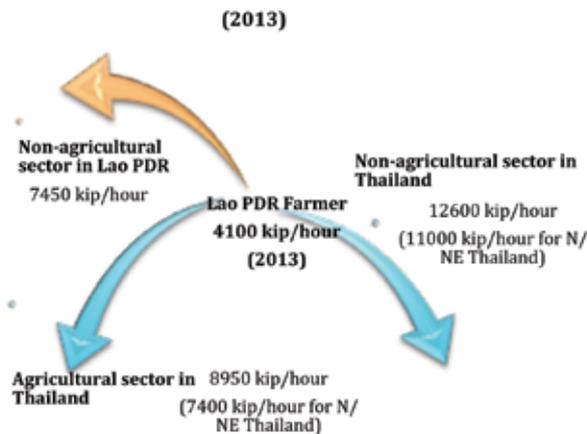
Source: Authors' calculations based on LECS III, VI, and V and Thai LFS

**40. Lack of data and information makes it difficult to pinpoint the factors that are preventing rural workers from moving into manufacturing and services jobs.** A wide range of factors could be affecting the desire and ability of workers to move to other sectors, including poor literacy or language skills, lack of information about opportunities, and difficulties finding housing in urban areas. Unfortunately, the available data does not provide sufficient information on what factors are constraining labor movements, although given the low levels of basic literacy as discussed in Chapter 4, insufficient literacy is likely one important factor.

**41. A comparison with other countries suggests that lack of sufficient incentives may be one factor preventing workers from moving to non-agricultural jobs.** Although non-agricultural jobs

offer higher wages, the current "wage premium" for non-agricultural jobs may not be high enough to pull workers off the farm. In Thailand, for example, during the big movement of farmers into the manufacturing sector that took place during the decade-long economic boom from 1986 to 1996, a farmer with secondary school education could nearly triple his or her income by making such a move (Figure 0.2). Thailand remains an attractive destination for many Lao workers, as even Thailand's agricultural wages are more than double those of Lao PDR's agricultural sector and are still higher than those of Lao PDR's non-farm sector (Figure 0.3). Although there are no exact figures for the number of Lao workers in Thailand, in 2006, UNDP estimated that at least 250,000 Lao workers worked in Thailand (UNDP, 2006). That number has likely increased further since 2006.

Figure 3.4: Comparison of non-agricultural wages in Lao PDR with wages in Thailand (2013)



Note: Wage rates shown are composition-adjusted, meaning that the representative worker is secondary school-educated and has 17 years of work experience (i.e. around 34 years old)  
Source: Authors' calculations based on LECS V and Thailand Labor Force Survey

**42. In addition to the low wage premium, bureaucratic barriers raise the cost of moving.** Although moving from a village to a city is allowed in Lao PDR, an individual first needs to obtain permission through a cumbersome set of bureaucratic procedures. A ministerial decree (633, 14/09/2012) from the Ministry

of Home Affairs describes the hurdles a family must overcome to be allowed to move, each of which is likely to deter families from even trying (see Box 3.2).

**43. The lack of labor movement in Lao PDR points to deeper problems in the manufacturing sector, including low productivity growth.** Without new machinery and other forms of capital, labor productivity growth will continue to be muted. While labor productivity of the Lao manufacturing sector was three times higher than agricultural labor productivity in 2013, labor productivity of Thailand's manufacturing sector in 1986 (when Thailand was at the stage of its development when the largest movement out of agriculture took place) was 15 times higher than the labor productivity of its agricultural sector. Similarly, during the rapid movement of Vietnamese workers from the agricultural to non-agricultural sectors in the 1990s and 2000s, labor productivity in manufacturing was four times higher than that in the agricultural sector in the 1990s and six times higher in the 2000s (McCaig and Pavcnik, 2013). This suggests that although Lao manufacturing firms are investing, they are not doing so at a high enough rate: as Table 0.1 shows, capital intensity (the ratio between the amount of labor and the amount of capital) has fallen in the Lao manufacturing sector since 2003.

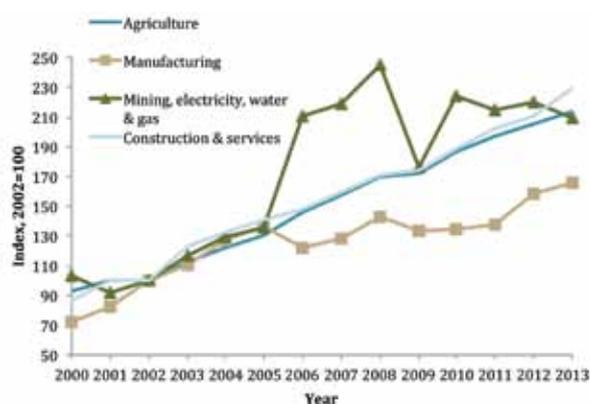
Table 3.1: Capital intensity by sector for Lao PDR and Thailand (value of capital stock (in constant 2002 Kip prices) per labor hour)

	Lao PDR			Thailand			
	2003	2008	2013	1986	1996	2006	2011
Agriculture	7,202	7,619	8,746	2,702	5,243	10,276	11,853
Manufacturing	16,466	12,277	12,619	35,282	67,060	66,791	81,742
Mining, electricity, water & gas	1,028,278	705,030	780,384	326,704	745,772	1,259,037	1,117,369
Construction & services	18,475	15,291	22,472	51,872	81,500	79,390	78,197
Aggregate	<b>13,289</b>	<b>13,746</b>	<b>19,126</b>	<b>18,635</b>	<b>44,742</b>	<b>56,445</b>	<b>59,832</b>

Source: National Statistical Center of Lao PDR and National Statistical Office of Thailand

**44. At the same time, the Lao manufacturing sector has experienced relatively unfavorable price developments.** As shown in Figure 0.4, price developments in the manufacturing sector have been unfavorable compared to those in agriculture and mining. The relatively high prices in agriculture make moving to the manufacturing sector less attractive to farmers. Rapid growth in the mining and hydropower sectors has begun to shape the Lao economy in a number of ways, bringing high rates of foreign direct investment, strong economic growth, and upward pressure on wages and the exchange rate.<sup>10</sup> Manufacturing firms, which are much less able to pass on higher costs in the domestic economy or gain from a weaker exchange rate compared to firms outside manufacturing, have therefore experienced depressed pricing power and competitiveness.

Figure 3.5: Output price index by sector in Lao PDR (GDP deflator)

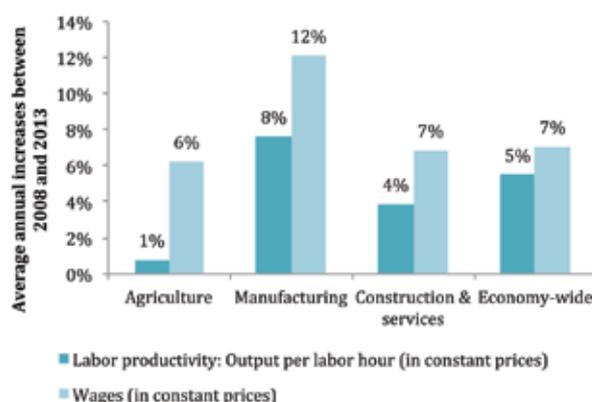


Source: National Statistical Center of Lao PDR (the graph shows sectoral GDP deflators)

**45. Rising labor costs without commensurate productivity gains have lowered profitability for manufacturing firms and limited their growth.** As illustrated by Figure 0.5, real wages rose at a faster rate than workers' productivity. For example, real wages in the manufacturing sector grew by 12 percent per year on average between 2009 and 2013,

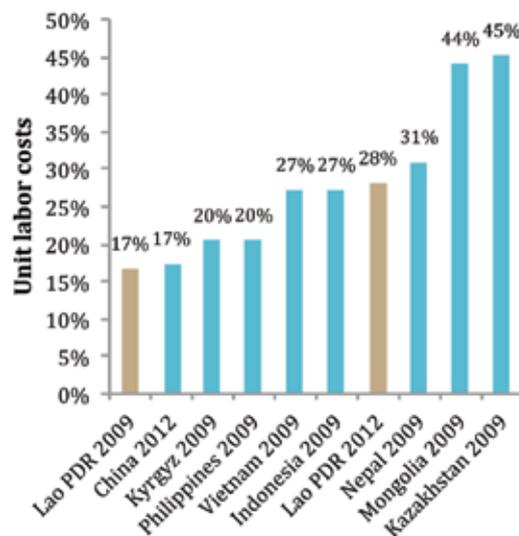
whereas worker output (per hour) rose by only 8 percent.<sup>11</sup> When labor costs rise faster than workers' productivity, firms' profitability shrinks, unless firms have the possibility of increasing the prices they charge for their products. In the case of Lao PDR's manufacturing sector, the rapidly rising wages implied lower profits (as shown by Figure 0.6 and Figure 0.7).

Figure 3.6: Increases in real wages and real labor productivity in Lao PDR, 2009-2013



Source: Authors' calculations based on LECS IV and LECS V (see Annex Table 1 for more details)

Figure 3.7: Country comparison of unit cost of labor of manufacturing firms



Source: World Bank Enterprise Surveys, 2009 and 2012

<sup>10</sup> In their past three annual reviews of the Lao economy, the International Monetary Fund (IMF) noted that the nominal exchange rate seems to be overvalued by as much as 20 percent (IMF 2011, 2012, and 2013).

<sup>11</sup> Point estimates of total factor productivity (TFP) in Lao PDR over the last three rounds of the enterprise survey (2006, 2009, and 2012) show only very limited improvements over the period. Moreover, the estimates suggest that TFP has been increasing more slowly than per capita GDP. Based on per capita GDP growth rates compared with other countries, one would expect TFP in Lao PDR to be around 75-85 percent higher than the estimates currently suggest. Estimates for labor productivity show a similar pattern (see World Bank 2014g for a fuller discussion).

Figure 3.8: Profitability in the manufacturing sector



Note: The horizontal axis displays median returns as a percentage of sales (pre-tax, no depreciation)  
Source: World Bank Enterprise Surveys

**46. Due to lack of sufficient information, the underlying causes of these rising labor costs without commensurate productivity gains are unknown.** Additional data and analysis are needed to understand why wages are rising so rapidly while productivity growth has been slow. The relative importance of the recent minimum wage increases, increases in public sector wages, demand for labor from the natural resources sector, and other possible contributing factors needs to be determined.<sup>12</sup> As discussed in Annex 1, in a rapidly changing labor market, only having information on labor movements and wages every five years is grossly insufficient.

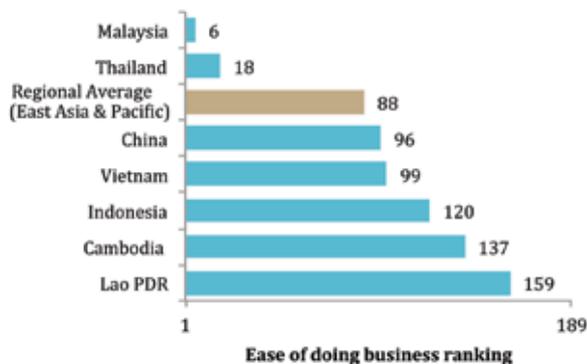
**47. Notwithstanding the limitations of the available data, manufacturing firms in Lao PDR find themselves in a difficult situation when it comes to their workforce.** With wages rapidly growing across the economy (for reasons which are not entirely clear), to retain and attract workers, manufacturing firms need to offer wages which are growing faster than workers' productivity. As described above, this implies falling profitability. This falling profitability perpetuates a vicious cycle in which firms struggle to make long-term investments that would improve labor productivity and justify the higher wages.

**48. The relatively sluggish growth of the manufacturing sector raises concerns over whether Lao PDR's structural transformation has come to a halt.** As discussed above, for nearly all advanced economies, the transition from agriculture to manufacturing was a key part of the development process. If this structural transformation does not occur, Lao PDR may not reach its full development potential, and growth may stagnate. The experience of the Philippines provides a cautionary example of what can happen when structural transformation is incomplete: as described in World Bank (2013d), the share of manufacturing to GDP has stagnated at around 25 percent since the 1960s, and the share of manufacturing employment to total employment has hardly risen above 10 percent. This failure to fully industrialize—in large part a product of policy distortions such as low public and private investments and protectionist policies such as the rice self-sufficiency policy—has resulted in a relatively weak economic growth record which has not brought significant poverty reduction or job creation. Unemployment and underemployment rates have remained stubbornly high at around 8 percent and 20 percent, respectively.

<sup>12</sup> As discussed in World Bank (2014g), the minimum wage applied to the private sector increased by 20 percent in 2009, followed by a further 80 percent increase that came into force in January 2012. Moreover, the Government has raised civil servant salaries by 35-40 percent annually over two consecutive fiscal years (2013-2014), which has put upward pressure on wages across the economy as more talented individuals are attracted from the private sector into employment in the higher-status and more job-secure public sector.

**49. A major roadblock to growth of the manufacturing sector is that the poor investment climate makes doing business in Lao PDR less attractive compared to other countries with similar labor costs.** Lao PDR is among the worst performers in the world in terms of business climate indicators. In the 2013 Doing Business assessment, which presents quantitative indicators on business regulations and the protection of property rights that can be compared across 189 economies, Lao PDR ranked at the bottom compared to other countries in the region in ease of doing business (Figure 3.9). It has the highest average number of visits or required meetings with tax officials in the East Asia and Pacific region (World Bank, 2014e) and some of the longest time delays to register a business across the region (92 days in 2012). Such extended periods of time may discourage business activity.

Figure 3.9: Comparison of Lao PDR and comparator economies in ease of doing business



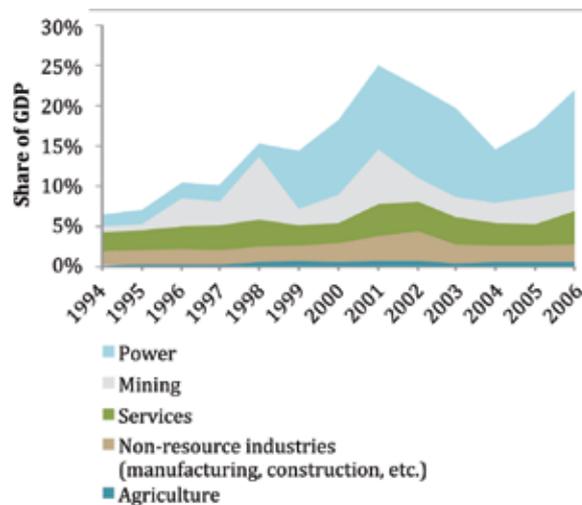
Note: The Ease of Doing Business index ranks economies from 1 to 189, with first place being the best. A high ranking (meaning a low numerical rank) means that the regulatory environment is conducive to business operation.

Source: World Bank (2013a)

**50. In contrast, the natural resources sector is the main recipient of private investment.** Although foreign and domestic private investment initially benefited the manufacturing and services sectors, the natural resources sector has become the primary recipient (Figure 3.10). Most natural resources investors operate under concession-based legal frameworks, outside of the mainline business environment. This has helped to fast-track large “mega projects” but can also weaken incentives to reform the broader investment climate, if sufficient

capital inflows and growth are coming through concession-based investments. As mentioned above, the investment and consumption boom associated with growth in the natural resources sector has contributed to rising labor costs which, in turn, has hurt manufacturing (not service) firms’ profitability. The booming resources sector has also contributed to an appreciation of the Lao Kip against trading partners’ currencies which hurts Lao PDR’s exporting firms, most of which are in manufacturing. The natural resources sector has thus started to reshape the Lao economy, putting pressure on labor and trade flows which has repressed the manufacturing sector while providing only limited direct employment opportunities, which points again to the importance of diversification.

Figure 3.10: Private investment in Lao PDR by sector (share of GDP)



Source: National Statistical Center of Lao PDR

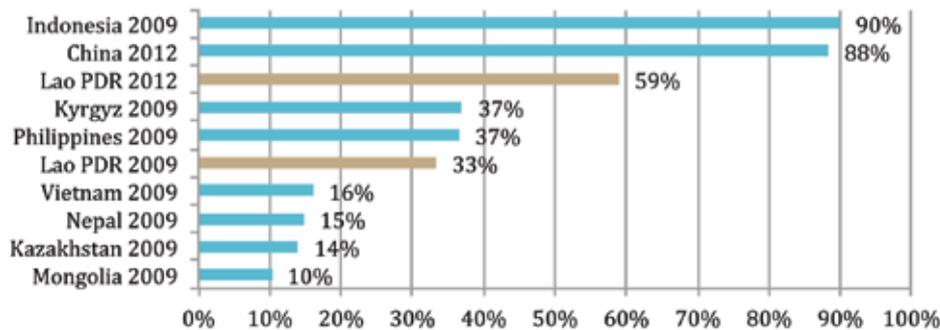
**51. Services firms have fared better than manufacturing enterprises and exporters.** Many services sector firms—especially those in construction, retail, and tourism—differ from manufacturing firms in a key aspect: the goods they produce are “non-tradable” and are not subject to international competition. These firms therefore have more flexibility to increase the prices of their goods to reflect high wage costs. Manufacturing firms do not have the same flexibility, as consumers can purchase their goods from a foreign firm instead. Given this key difference, services firms have fared much better than manufacturing enterprises, as shown in Figure 3.11 compared with Figure 3.8 above.

**52. In considering how Lao PDR can continue on the path of structural transformation, two “myths” related to the Lao labor force should be addressed.**

Two common myths or misconceptions about the Lao labor force threaten to derail or negate the need for efforts to expand productive employment opportunities. One misconception is that Lao PDR has been experiencing a huge influx of foreign workers, presumably to make up for a shortage of domes-

tic workers. Another myth is that Lao workers lack the motivation or work ethic needed for jobs in manufacturing or services. These misconceptions, discussed further in Box 3.3, need to be dispelled, as they provide an inaccurate picture of labor market dynamics and thus fail to recognize the importance of generating better employment opportunities for Lao PDR’s expanding workforce.

Figure 3.11: Profitability in the services sector



Note: The horizontal axis displays median returns as a percentage of sales (pre-tax, no depreciation). “Services” refers to all retail, construction and service firms, i.e. with ISIC Rev. 3 groups E through K.  
Source: World Bank Enterprise Surveys

**Box 3.3: Challenging two common misconceptions about the Lao workforce**

*Misconception #1: The Lao labor market is being flooded with foreign workers to make up for a domestic labor shortage*

A common perception in Lao PDR is that the labor market has been experiencing a sudden, massive wave of foreign workers, mainly from Vietnam and China. This view suggests that Lao PDR has a shortage of domestic workers, so labor market demand must be met by foreign workers instead.

Although the data are scarce, the available survey data indicate that Lao PDR has relatively few foreign workers, particularly in non-managerial and non-professional positions. According to Enterprise Survey results, only 2 percent of unskilled workers in Lao PDR are reported to be foreign, compared to more than 20 percent in Yunnan province (China). The comparison with Yunnan Province also clearly shows that foreign workers in Lao PDR are

mainly used to fill skills gaps at the high end of the skills spectrum (i.e. for managerial and professional jobs). While it may be argued that the available data do not capture the full extent of influx as some foreign workers may be informally employed and “under the radar,” quantitative evidence of a huge wave of foreign workers is lacking.

Furthermore, contrary to popular belief, Lao PDR is not suffering from a shortage of domestic workers. As discussed earlier in this report, Lao PDR has a large reservoir of workers in the agricultural sector who could potentially take up jobs in manufacturing and services.

Figure: Percentage of foreign workers in Lao PDR and Yunnan province (China), by skill level

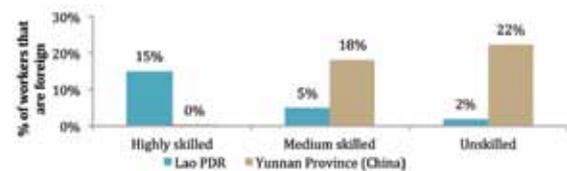
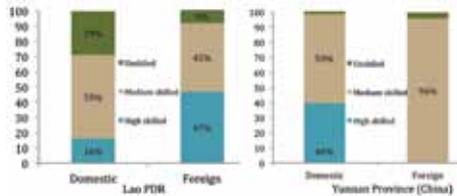


Figure: Composition of domestic and foreign workforce in Lao PDR and Yunnan province (China), by occupational group



Source: Enterprise Surveys (2012) in Lao PDR and Yunnan Province (China)

*Misconception #2: Lao workers are ill-suited for factory life*

A common myth about Lao workers is that they are not suited to work in factories and firms due to cultural and lifestyle reasons. It has been suggested that they lack the discipline and work ethic required to commit to working on a specific schedule under a long-term contract. Furthermore, even if presented with higher-paying opportunities outside agriculture, they might choose to remain on the farm because they place higher value on having more free time.

This myth is not unique to Lao PDR. In all countries, there have been myths about how the poor are unmotivated and unsuited for longer working hours. As described in Chang (2007), early in the development processes of Germany and Japan, dismal predictions were made of the “cultural suitability” of their workforces (characterized as “Thieving Germans” and “Lazy Japanese”) for moving into the modern industrial sector. These assertions of course proved to be ridiculous and have been completely debunked. Examples from around the world have shown that when people are empowered with the appropriate skills and can access better opportunities, they seize the chance to improve their livelihoods and escape poverty. This report recognizes the barriers and disincentives Lao workers have faced in improving their livelihoods and suggests that the key is to expand the opportunities available to them.

Although the myth about Lao workers should be debunked, this is not to say that the influence of social and cultural factors on employment decisions is trivial. To ensure that labor market interventions target the appropriate incentives for workers, it will be important to understand all of the factors at play in worker decisions to move (or not) between jobs and sectors. For example, one potential impediment to mobility might be the cost and type of accommodations available to rural migrants in urban areas. This is both a lifestyle issue as well as an economic issue that may affect incentives to migrate.

## II. Current Government Approach

**53. Although Lao PDR has started to undergo a market transition, the Government continues to play a dominant role in the post-centrally planned economy.** The state can engage in and influence the economy through four primary channels: production of goods and services, transfer payments, taxation, and regulation. While the state may be involved in more than one of these channels, the concern is whether there is separation of ownership from control, with independent sector regulation. The government continues to exercise significant influence in the Lao economy with substantial ownership in the banking, insurance, and telecommunications sectors, among others. There is limited separation between ownership and control and generally weak oversight and regulatory mechanisms, exposing the state to elevated risks and at times discouraging private investment due to concerns about the lack of a level playing field.

**54. Legislation is often inconsistently designed and applied, which contributes to uncertainty in the business climate.** Inconsistent application of regulations and lack of transparency and predictability can generally be seen across all sectors and areas.

For example, legislation may be less effectively and equally applied in sectors such as commercial banking, telecommunications, and insurance. Some foreign direct investments in Lao PDR and concessions are often approved with non-standardized special conditions and incentives. Rapid expansion of the legal framework for business during a time when Lao PDR has been attempting to accede to various international bodies (such as the WTO and ASEAN) has exposed structural weaknesses in the law-making process. Lower-level implementing regulations often conflict directly with higher-level legal frameworks, creating uncertainty and providing opportunities for rent-seeking behavior among officials. Such inequality, inconsistent application of rules, and differential treatment results in unfair competition, corruption, distortions, and inefficiency in resource allocations.

**55. Regulatory inconsistency and the ambiguous role of the state can generate different interpretations and misunderstanding at the operational level.** One good example is the law on tourism, approved in 2005 but only partially applied and currently under revision. The key principle of the law is that private firms can operate in that sector, but many provisions remain unimplemented. The ambiguous role of the state as regulator and as investor in the production and supply of services also provides room for discretionary and inconsistent actions, which often exacerbate frustrations.

**56. While broader efforts have been made to simplify the process of starting a business, such gains are increasingly being undermined by complex secondary licensing and approval requirements at the sector level.** For example, the tourism sector remains clogged up by a complex web of licensing regulations, much of which is redundant. New investors in hotels and restaurants are required to present a business plan to the authorities for scrutiny when submitting initial sectoral licensing level applications. Such business plans are, among many other things, required to demonstrate profitability and must include detailed lists of staff employment expectations. It is difficult to see any value-added from imposing such a redundant process on businesses, which is costly and time-consuming and discourages quality investment.<sup>13</sup>

**57. At the same time, far too many straightforward and simple business activities are subject to government regulation.** Such processes (licenses, permits, and permissions) provide little value added to the private sector and are associated with both formal and informal payments, making them difficult to reform.<sup>14</sup> The net effect is that substantial activities of government departments are focused on day-to-day transaction processing and the collection of “technical revenues.” For example, detailed mapping of the flow of documents in processing applications for import licenses indicates that license applications go through eight review steps within just one government department. Aside from concerns about rent-seeking opportunities and compliance costs for the private sector, this results in a significant share of the human resources of government departments simply pushing paper from one desk to another.

**58. When problems arise, business operations are further impeded by the limited experience and competency of public bureaucrats who should**

**manage and solve these problems.** Delayed decisions cause loss of time and money for businesses, as evidenced in competition disputes in telecommunications, insurance, and land use. Furthermore, Lao PDR has almost no effective mechanisms available for the private sector to seek redress in any dispute with the government (e.g., on taxes, customs, licensing).

**59. These factors contribute to Lao PDR’s poor ranking on measures of the costs of doing business.** In 2012, firms in Lao PDR reported spending an average of nearly 8 percent of senior management time dealing with government regulations. This is substantially higher than in comparable economies and represents an increase in the share reported by firms in the previous enterprise survey in 2009. Similarly, firms in Lao PDR are visited by officials (tax and otherwise) much more frequently than in comparator countries. High regulatory compliance costs are one of the top business environment complaints in Lao PDR. For example, businesses are much more likely to complain about tax administration than tax rates, suggesting that regulatory compliance costs are a significant investment climate constraint.<sup>15</sup>

**60. While efforts have been made to improve the investment climate, much of the reform agenda has focused on facilitating natural resource sector investments and “mega projects” rather than on diversified sectors.** Furthermore, natural resource investors have been more able to absorb high investment transaction costs thus far thanks to larger resource rents and economies of scale. High transactions costs, as a share of business investment costs, discourage small investors in diversified sectors of the economy. Even in areas where Lao PDR has implemented investment climate reforms, it still lags behind comparator countries since reforms have been implemented elsewhere in the region, thus maintaining the gap.

<sup>13</sup> See World Bank (2014g) for further discussion.

<sup>14</sup> There are obvious negative incentives opposing the abolition of licensing requirements at the individual level when opportunities to earn informal fees are likely to be lost. Similarly, given current fiscal pressures in Lao PDR resulting in budget cuts, lower-level government units are increasingly reluctant to surrender opportunities to collect “technical revenues” that accrue directly at the agency level. The justification for many such blanket licensing requirements (which for the most part are a legacy of the central planning process) is for the collection of statistics. There are of course much more cost-efficient ways of compiling statistical data that is useful for policymakers.

<sup>15</sup> See World Bank (2014g) for further details.

### III. Recommendations

**61. Although the natural resources is an important engine of growth for Lao PDR, overreliance on the natural resources sector carries risks and tradeoffs.** As discussed above, while the natural resources sector is an important source of revenue and growth for Lao PDR, it generates limited jobs and can repress the growth of other sectors, particularly sectors such as manufacturing that play an important role in the process of economic modernization. Furthermore, increasing dependence on natural resources can leave the economy more exposed to the inherent risks of commodity dependency.<sup>16</sup> To ensure more sustainable, broad-based growth, greater emphasis is needed on developing an economy that creates a variety of jobs in a wider range of sectors. In particular, it will be important to facilitate greater growth in employment-generating manufacturing and services subsectors that are not tied to the natural resources sector.

**62. Beyond the natural resources sector, Lao PDR has a diversity of subsectors-including within manufacturing-that offer promising growth opportunities.** The manufacturing sector encompasses a large group of activities, not only the more “traditional” foreign direct investments associated with catch-up industrial development in low-income economies such as garments, footwear, and light electronics. Given the greater relative abundance of natural rather than human resources in Lao PDR, more promising opportunities may in fact lie in small-scale manufacturing that is closely related to the agricultural and agribusiness sector, for example in milling, coffee, fruit, and vegetables.<sup>17</sup> These opportunities “at the farm gate” offer potential for diversified development, but increased activity is constrained by high-cost supply chains and border costs, weak extension and support services, small volumes, and poor conformity with international sanitary and phytosanitary standards.

**63. To help maximize growth potential across the manufacturing and services sectors, improving the investment climate is an urgent priority.** Vietnam and China have shown that it is possible to develop a vibrant manufacturing sector despite relatively poor rankings on the Doing Business indicators. However, both countries offered investors large and attractive domestic markets and easy access to world markets with higher-quality and lower-cost logistics services. In contrast, Lao PDR cannot afford to remain at the bottom of the rankings. As a land-locked country with poor connectivity to other countries and a small domestic market, Lao PDR must maximize the opportunity to develop more vibrant non-resource sectors. An improved investment climate will allow manufacturing and service sector firms to accumulate capital and raise their productivity, which will in turn improve profitability and enable firms to offer higher wages that can help draw workers into more productive jobs. Recommendations in three key areas are presented below.

**64. Although there are a host of other issues affecting private sector development in Lao PDR such as infrastructure constraints, this report focuses on the critical “soft” issues that are yet to be addressed.** Policymakers in Lao PDR are well-aware of the continued infrastructure constraints to further private sector development and have made progress in addressing them. A series of investment climate assessments has shown a progressive shift over the past decade in the factors that are identified as major investment constraints, with a shift from “hard” issues (i.e. power supply, roads, border crossings) toward “soft” issues (i.e. labor/skills, regulatory compliance). However, policy attention to these “soft” issues has been limited to date. The recommendations of this report thus focus on these “soft” issues that are now identified by firms as the most serious constraints.

<sup>16</sup> Such as greater risk of terms-of-trade shocks, the early onset of diminishing marginal returns, and the risks associated with limited export/product diversification. See Brahmhatt and Vostroknutova (2010) for a fuller exposition.

<sup>17</sup> See World Bank (2014f).

*Streamlining and simplifying the business compliance and transaction costs associated with dealing with government*

**65. The Government must do much more to demonstrate a commitment to creating a more business-friendly environment, an important part of which involves lowering the costs of doing business.** This will require extensive efforts to rethink the way the state engages and interacts with private enterprise. The public sector should move away from direct regulation of business activity through licensing, permits, and taxation toward an approach of facilitation, with much greater use of risk-based approaches creating the necessary conditions to attract investors. At the present time, only in customs has any attempt been made to introduce risk-based compliance processing in functions where the government interacts with businesses.<sup>18</sup> There is enormous scope to adopt similar risk-based approaches for other government functions such as sectoral licensing and control mechanisms, which can be achieved in many areas without any need for investment in automated systems.

**66. One key change would be to substantially reduce the number of sectors requiring non-automatic licensing and permits for establishment and/or operations, both importing and exporting.** This would require a large and wholesale process to eliminate unnecessary processes, measures, licenses, and government requirements for businesses. Compliance would be assumed in all but a handful of sectors. Regulatory control would remain only in limited areas where there is a strong public goods rationale (for example, relating to public health or security) for prior regulation. By freeing up civil servants from day-to-day transactions processing, much greater effort could be directed at higher-risk activities that require government regulation.<sup>19</sup> Remaining regulatory requirements could be processed through full electronic data interchange systems—for export/import transactions, for example, with a regulatory National Single Window that includes full electronic

authorization. This will require sustained political will for reform, given the strong financial incentives that are currently associated (both formally and informally) with such face-to-face interactions between the public and private sectors.

**67. Transaction costs could also be reduced by deeper investments in infrastructure and services for competitiveness, but on an affordable basis.** For example, at-the-border and behind-the-border reforms to reduce the transactions costs associated with international trade—which are felt most keenly by small traders in the non-natural resources sectors—should be continued. Investments in border facilities, power, telecommunications, and regulatory infrastructure could all help reduce transaction costs.

*Improving transparency in the provision of public sector services to business*

**68. Lao PDR needs a public commitment to substantially greater transparency in all aspects with which the state engages with the private sector.** Businesses in Lao PDR suffer from a lack of transparency in what they can expect from government, and in turn what government expects from them. Poor transparency results in greater uncertainty, higher risk, and increased opportunities for rent-seeking and in a weaker investment climate. Recommended policy measures include the compulsory publication of all fee schedules, permits, and licensing requirements; tax, excise, customs and duties; and business processing requirements with which firms are expected to comply. Electronic publication of laws, regulations, and schedules should be granted equal treatment with print publication, with much greater public access. This is important both to improve private sector understanding of regulatory requirements and to reduce the scope for discretionary enforcement by the public sector. The Lao Trade Portal (Box 3.2) is an interesting example in which Lao PDR has made important steps in improving regulatory transparency in line with international requirements on trade.<sup>20</sup>

<sup>18</sup> The introduction of an automated customs processing system that allows for import declarations to be allocated to red, yellow, green, and blue customs processing channels according to risk has helped to cut average clearance times, provides a positive incentive for increased private sector compliance, and allows officials to prioritize attention toward higher-risk traders.

<sup>19</sup> See World Bank (2012), Streamlining Non-Tariff Measures - A Toolkit for Policy Makers.

<sup>20</sup> See <http://www.worldbank.org/en/news/feature/2012/07/09/lao-pdr-new-online-platform-to-boost-trade-transparency> for further details on the Lao Trade Portal. A good practice note was developed by the World Bank International Trade Department based on the Lao model—World Bank (2012), Developing a Trade Information Portal, The World Bank, International Trade Department.

**Box 3.4: The Lao PDR Trade Portal: Making trade more transparent**

The Lao PDR Trade Portal ([www.laotradeportal.gov.la](http://www.laotradeportal.gov.la)), launched by the Ministry of Industry and Commerce on June 22, 2012, enables traders to reduce the number of trips needed to obtain information or the length of time for carrying out transactions when trading across borders. It is also the first step toward the establishment of a National Single Window that will allow traders to discharge all import/export obligations through one channel electronically.

The Lao PDR Trade Portal provides traders with access to:

- All trade-related laws, regulations, measures, restrictions, and licensing requirements as well as tariffs indexed, cross-referenced, and searchable by commodity code;
- Detailed process maps of business procedures for importing and exporting;
- Full listings of national standards for products;
- Procedures for clearing goods at the border;
- Downloadable forms; and
- E-alerts which traders can customize to receive information on commodities.

The Lao PDR Trade Portal is also helping Lao PDR comply with WTO and ASEAN commitments that require member countries to make their trade-related regulations available to the public in an easily accessible manner.

**69. Implementation of laws also needs to be strengthened.** Including on compulsory prior consultation on draft legislation before adoption, prior publication of approved legislation before implementation, and full transparency of legal instruments and implementation of “sunset clauses” that would automatically revoke redundant legislation.<sup>21</sup> Nontransparent drafting processes that do not include adequate consultation with the private sector are more likely to result in poorly defined legal instruments, with inconsistencies across regulations

and between domestic and foreign obligations, and with unforeseen negative consequences. The overall effect is reduced confidence among private sector investors, the persistence of direct conflict between different legal texts, and difficulties in actual implementation.

*Establishing a more predictable playing field for the private sector.*

**70. The investment climate could also be improved by strengthening the rule of law and ensuring that firms, both domestic and foreign, have access to a level playing field.** This would require fundamental change in the way that public officials interact with businesses, with primacy given to the consistent implementation of publicly available legislation, rules, and regulation and to a reduction in bureaucratic discretion. The high frequency of “deals” versus “rules,” a process which has been exacerbated by the role that large “mega” natural resource projects have played in Lao PDR’s recent economic development, runs the risk of benefiting insider investors or those with privileged access, against the interests of the broader private sector.

**71. A low-cost, transparent, and independent appeals process for all administrative decisions regarding private enterprise (on tax, customs, and licensing decisions) needs to be established.** Inconsistent and arbitrary application of rules undermines investor confidence. Businesses should be granted access to fast, low-cost, and independent arbitration mechanisms when disputes occur with the government. In broader terms, Lao PDR also needs to move away from a system based on negotiation to one based on the consistent application of a clear, transparent, and predictable framework for taxation, licensing, and general interaction between the state and enterprises.

<sup>21</sup> The new 2012 “Law on Making Legislation” establishes a number of key principles in this area and brings much-needed common standards to the legislative process in Lao PDR. However, compliance has been patchy thus far.

**72. Key conflicts of interest exist in a number of sectors, particularly in services where the Government is both regulator and shareholder.** This inevitably creates tensions, discourages investment, and leads to both real and apparent conflict of interest. Major efforts are needed to establish clear separation between the Government's two different functions and to put in place much stronger and more independent regulatory bodies in key services (including in particular in telecommunications, transport, and financial services<sup>22</sup>).

**73. Similarly, greater efforts are required to facilitate improved public-private sector dialogue as a means of resolving issues of broad private sector interest in an open and transparent manner.** Previously, the Lao Business Forum acted as a mechanism for coordinating the analysis of broad private sector development issues for presentation to the Government for resolution. Infrequent meetings and poor follow-up has resulted in a loss of confidence in public-private sector dialogue, which in turn has undermined efforts to address public interest issues affecting business. The lack of effective and open mechanisms for engaging in public-private dialogue also reinforces "deals" versus "rules"-based approaches to the resolution of public-private disputes.

## IV. Conclusion

**74. Promoting diversification and managing the growth of the natural resources sector appropriately will improve longer-term prospects for the workforce and the overall economy.** If the natural resources and services sectors continue to grow while manufacturing firms struggle to raise their labor productivity to a level where they can offer attractive wages, Lao PDR will not generate the jobs necessary

to keep its growing labor force engaged in productive employment. Thus, the measures proposed above to help promote greater diversification can have longer-term impacts in improving livelihoods, maintaining stability, and promoting stronger economic growth.

**75. As greater diversification generates more productive employment opportunities, it will be critical to ensure that the Lao workforce is equipped with the knowledge and skills to be able to take up these jobs.** Increasing the number of productive employment opportunities only addresses the labor market demand side of the equation. On the labor supply side, particularly for the new jobs created in the "modern" sectors of the economy, it will be important to have a literate, skilled labor force. Without workers who are qualified enough to move into the jobs that are created, productivity and growth will stagnate. The following chapter looks at the skills situation in Lao PDR and discusses the challenges that must be addressed to ensure that the workforce is well-equipped to take advantage of the productive employment opportunities that are and will become available.

**76. Other barriers to worker mobility in Lao PDR must also be identified and addressed.** As discussed earlier, while this discussion has focused mainly on how insufficient wage differentials may be disincentivizing workers to move between sectors, other factors may be influencing their decisions. Other reasons for the slow transition out of agriculture and rural areas could include lack of Lao language skills, lack of information, poor transport infrastructure, and lack of safety nets. However, information on the extent to which such factors may pose a barrier to employment transitions in Lao PDR is lacking. As discussed in Chapter 5, further research is needed to understand these issues to ensure that government policies address the barriers effectively.

<sup>22</sup> Lao PDR has made a number of commitments in these areas as part of the process of acceding to the World Trade Organization in 2013.



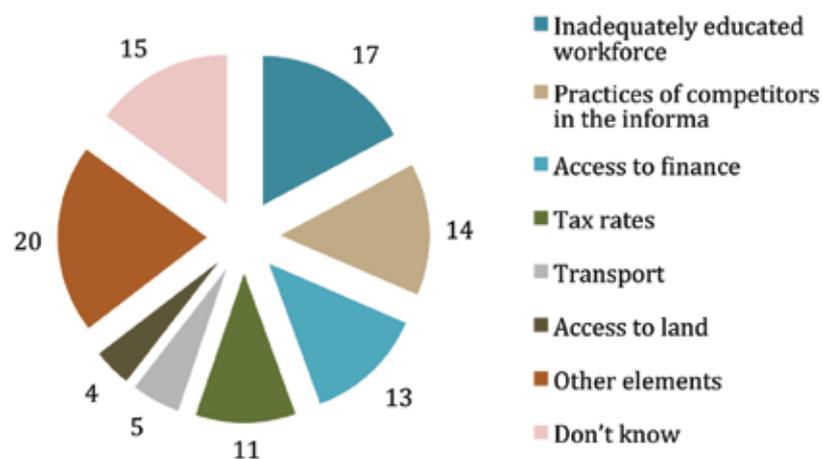
## Chapter 4: Building Critical Knowledge and Skills for Productive Employment

**77. Efforts to foster the growth of productive employment opportunities must be accompanied by efforts to equip the Lao workforce with the knowledge and skills to take up these opportunities.** As discussed in Chapter 3, the expansion of employment opportunities in diversified sectors will require a more skilled workforce. However, recent assessments indicate that Lao PDR faces a serious gap in skills, even at the level of basic literacy. Skills development efforts must therefore go beyond the current focus on vocational skills to ensure that the workforce possesses the basic foundational skills necessary to gain even more skills and be productive. This chapter looks across all stages of skills development and identifies priority areas for ensuring that the Lao workforce will be able to meet the demands of the labor market.

**78. Lao PDR’s “skills problem” has become the number one concern of firms.** As shown in Figure 4.1, when firms were asked to rank the top three constraints they face, the largest proportion of firms identified “an inadequately educated workforce” as their biggest constraint in 2012. The problem appears to be growing more severe—in 2009, a greater proportion of firms ranked “crime, theft, and disorder” and “access to finance” as their top constraints. By 2012, 17 percent of firms said that an “inadequately educated workforce” was their top constraint, overtaking the other constraints in the ranking.<sup>23</sup>

## I. Context and Challenges

Figure 4.1: Percentage of firms identifying each factor as the biggest constraint in Lao PDR in 2012



Source: World Bank Enterprise Survey 2012

<sup>23</sup> The “other elements” category is the sum of the following nine possible constraints (which were also presented to firms): “Business licensing and permits”; “Corruption”; “Courts”; “Crime, theft and disorder”; “Customs and trade regulations”; “Electricity”; “Labor regulations”; “Political instability”; and “Tax administration.”

**79. Lao PDR also stands out in Asia as the country where worker skills are the most severely criticized.** As shown in Figure 4.2, around 10 percent of Vietnamese employers criticized the inadequacy of workers' skills in 2009, compared to 19 percent of their Lao counterparts. Although no Enterprise Surveys were carried out in most comparator countries in 2012, the share of Lao firms reporting that low skills was either a major or a severe constraint in 2012 was double that of Vietnam in 2009.<sup>24</sup>

Figure 4.2: Country comparison of percentage of employers complaining that an inadequately educated workforce is either a major or a severe constraint<sup>25</sup>

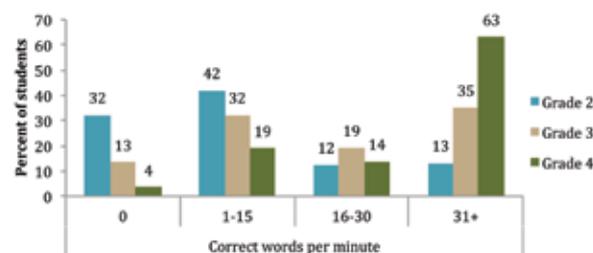


Source: Authors' calculations with various World Bank Enterprise Surveys

**80. However, the skills problem in Lao PDR is even deeper and more severe than is generally recognized, being a problem not simply of vocational skills but of even basic reading and numeracy skills.** An Early Grade Reading Assessment (EGRA) conducted in October 2012 found that over one-third of 2nd graders cannot read a single word correctly (Figure 4.3). The problem is even worse among children who do not speak the Lao language at home. Students begin to achieve fluency in reading—an ability strongly related to reading comprehension—only at the end of grade 3, which means it takes three to four

years of schooling to achieve this basic level of literacy. Even then, the EGRA found that over 40 percent of students in grade 4 had not achieved basic reading fluency (World Bank, 2014e).

Figure 4.3: Basic reading skills in grades 2-4 in Lao PDR



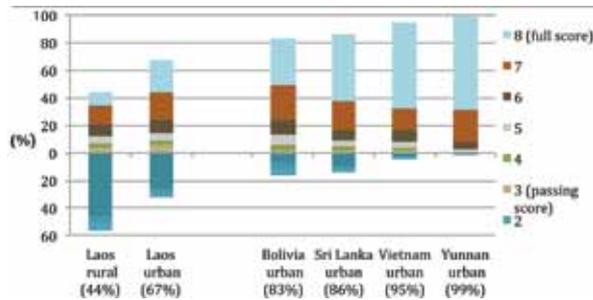
Source: World Bank (2014e)

**81. An international comparison underscores the extent of the problem and the implications for Lao PDR's competitiveness.** Results from a recent assessment of adult literacy skills (World Bank 2013e) show that Lao PDR's adults' literacy skills are significantly poorer than those of comparable countries such as Vietnam, Bolivia, Sri Lanka, and Yunnan province in China (Figure 4.4). About 64 percent of the rural population and 33 percent of the urban population could not pass the assessment that tested reading comprehension and ability to decipher text, compared to less than 10 percent in Vietnam and Yunnan province (World Bank, 2013c). Moreover, the assessment found that adults in Lao PDR consistently underperform at all educational levels compared to other countries. As shown in Figure 4.5, only 32 percent of people in Lao PDR with secondary schooling achieved perfect scores, compared to 81 percent in Vietnam. Post-secondary graduates in Lao PDR performed almost on par with people with only primary schooling in Vietnam (World Bank, 2013e).

<sup>24</sup> As discussed in more detail in World Bank (2014g), the Enterprise Survey uses two complementary ways to identify the biggest constraints firms are facing: one approach uses one question to ask firms to identify their most binding constraint from a list of possible options (used for creating Figure 4.1); another approach asks the firm to rate each of the possible constraints (used for creating Figure 4.2).

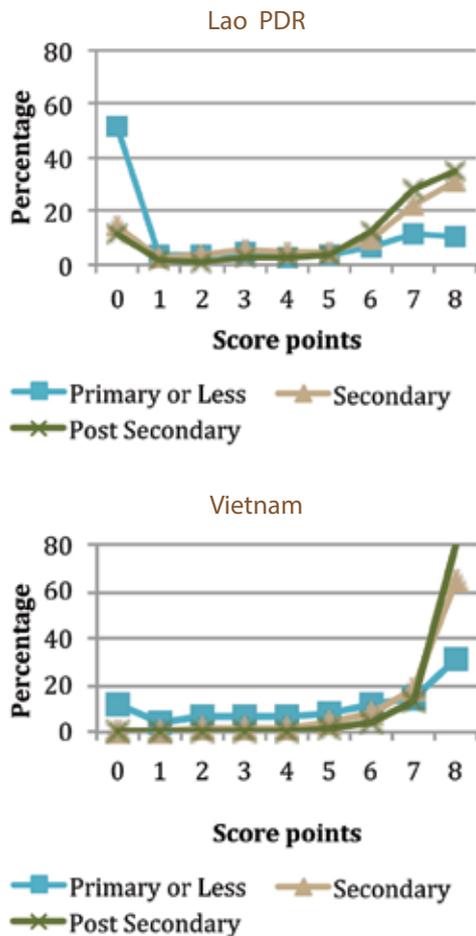
<sup>25</sup> The graph was made using Enterprise Surveys from across the world. The survey asks employers to identify if an inadequately educated workforce is one of the following: not an obstacle, a minor obstacle, a moderate obstacle, a major obstacle, or a very severe obstacle. The graph shows the sum of firms answering that an "inadequately educated workforce" is either a "Major" or "Severe" obstacle.

Figure 4.4: International comparison of adult literacy skills<sup>26</sup>



Source: STEP Household Survey 2011/12

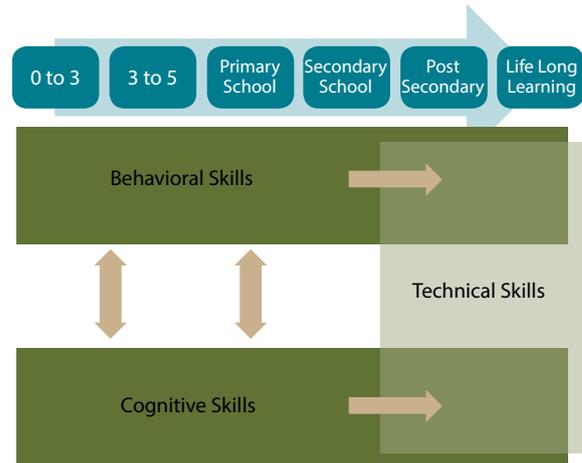
Figure 4.5: Comparison of adult literacy by education level in Lao PDR and Vietnam



Note: Graphs show scores on basic literacy test (from 0-8 points) for adults with different education levels in Lao PDR (left graph) and Vietnam (right graph).  
Source: STEP Household survey 2011/2012. Within the survey, there is a literacy assessment designed by Educational Testing Service (ETS).

**82. The low level of literacy in Lao PDR is particularly troubling because those skills are the foundation upon which other skills are learned and developed.** Figure 4.6 illustrates the process of skills formation across different age groups. Children who do not learn to read in the early grades risk falling behind in later grades—perhaps even dropping out of school—and have difficulty attaining more sophisticated critical thinking and analytical reasoning skills and technical skills, as learning them involves some degree of ability to absorb written information. Failure to master basic foundational skills can thus undermine an individual’s future employment prospects and productivity.

Figure 4.6: The process of skills formation



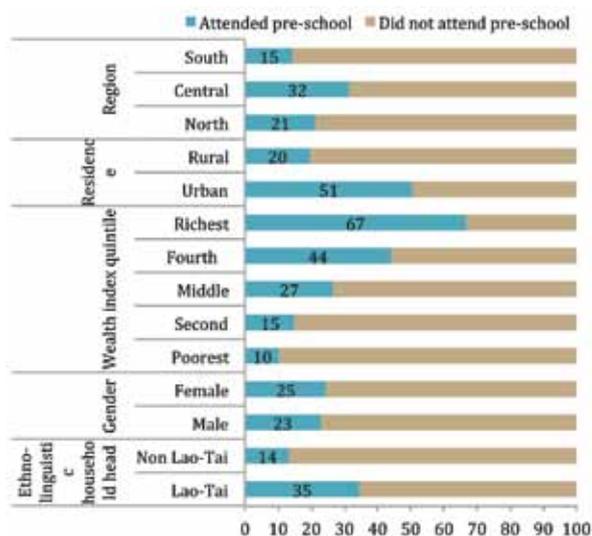
Source: World Bank (2013e).

**83. Basic literacy (or lack thereof) has real implications for economic growth.** As discussed in Gove and Wetterberg (2011), recent research reveals that it is learning, not years of schooling, that contributes to a country’s economic growth. It has been estimated that a 10 percent increase in the share of students achieving basic literacy translates into an annual growth rate that is 0.3 percentage points higher than it would otherwise be for that country (Hanushek & Woessman, 2009).

<sup>26</sup> The figure shows percentage of participants scoring 0-8 on the literacy assessment, with 8 being the maximum score and 3 representing the passing score. The percentages reported next to country names are the percentage of participants who passed the assessment.

**84. Access to early childhood education (ECE) is also problematic.** Lao PDR lags far behind its neighbors in providing access to full-day preschool for children 5 years of age. Furthermore, government ECE programs cover mainly 5-year-old children in the “pre-primary classroom” attached to a primary school, leaving 3- and 4-year-old children with limited access. As shown in Figure 4.7, ECE services are available mostly for the richest segments of the population and mainly in urban areas. Only 10 percent of the poorest children attend any form of organized ECE before they enter primary school, compared to 67 percent of the richest children. About half of children in urban areas attend, compared to 20 percent in rural areas.

Figure 4.7: Share of first graders who attended any form of pre-school in Lao PDR



Source: Lao Social Indicators Survey (LSIS), 2011-12

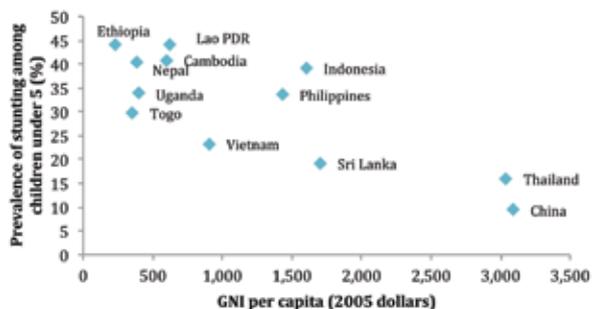
**85. Notably, problems with learning are linked to child health and nutrition, as stunting has severe negative effects on cognitive development.**

Lao PDR has one of the highest rates of stunting in the world, with 44 percent of children below age 5 being stunted (Figure 4.8). This stunting is largely a result of inadequate feeding practices at an early age, despite improvements in food security in Lao PDR, and poor sanitation. Children who are stunted are more likely to have lower cognitive abilities, as documented extensively in the literature.<sup>27</sup> Key parts of the brain develop less in children who are severely malnourished, making it much more likely that these children will never make it to school or will drop out early.

Compared with non-stunted children, stunted children:

- score 7 percent lower on math tests;
- are 19 percent less likely to be able to read a simple sentence at age 8, and 12 percent less likely to be able to write a simple sentence; and
- are 13 percent less likely to be in the appropriate grade for their age at school.<sup>28</sup>

Figure 4.8: Prevalence of stunting among children under age 5 (%)<sup>29</sup>



Notes: GNI per capita is based on 2011 figures. Stunting rates are latest available data.

Source: WDI

<sup>27</sup> See Hoddinott, Alderman, Behrman, Haddad, and Horton (2013) for a review of this literature.

<sup>28</sup> See Save the Children (2013). These impacts remain after controlling for children's backgrounds, including where they grew up and went to school.

<sup>29</sup> Prevalence of stunting is a measure of severe child malnutrition. It is measured as the percentage of children under age 5 whose height for age is more than two standard deviations below the median for the international reference population ages 0-59 months.

## II. Current Government Approach

**86. Lao PDR has made considerable progress in expanding access to education.** A large effort to build a national school network and staff schools with teachers has contributed to significant achievements in the education sector in recent years. The country is on track to meeting the Millennium Development Goal (MDG) of a 99 percent net primary enrollment rate by 2015, with a high degree of gender parity.

**87. In its Education Sector Development Plan (2010-2015) and National Policy on Holistic Early Childhood Development (2010), the Government has also recognized the critical importance of ECE for all children.** It has laid out ambitious targets for access to ECE services for 5 year olds (55 percent by 2015) and introduced the expansion of services for 3-4 year olds as a key priority in education, with more modest but still relatively ambitious targets (17 percent by 2015). Furthermore, the National Policy on Holistic ECD sets out policy priorities for the 0-2 year age group, including parenting education and health support for pregnant and lactating mothers. In addition, the Government has recognized that new low-cost and flexible modalities of service provision may facilitate the expansion of services in remote areas. The Government is wisely introducing these modalities gradually, testing and evaluating them before considering a significant expansion. The lessons learned from these pilots will be crucial for developing community-based programs that can be effective in the Lao context and

which can play an important role in expanding access to ECE in a sustainable manner.

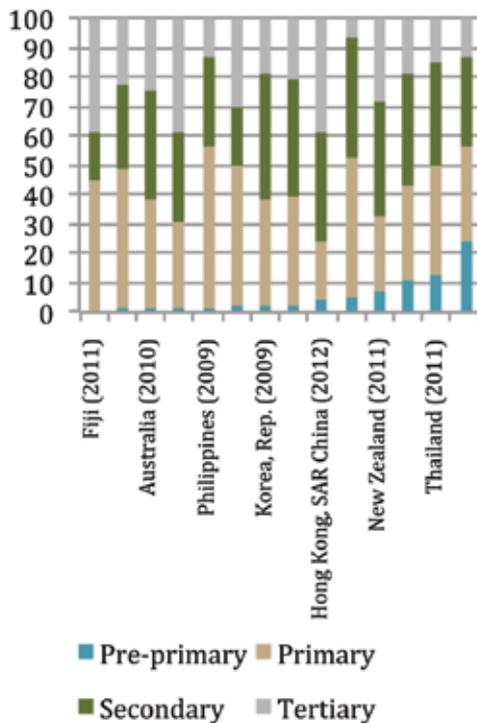
**88. However, much remains to be done, as noted in the sobering Ministry of Education and Sports (MOES) mid-term review of its Education Sector Development Plan for 2011-2015.** While net primary enrollment rates have increased, grade 1 dropout and repetition rates have not improved over the past six years, meaning that children are enrolling but either drop out or repeat their grades. Moreover, the national figures mask large variations across the country, with three provinces (Phongsaly, Houaphan, and Savannakhet) lagging behind (MOES, 2013).

**89. The recent media spotlight on the “skills problem” has prompted a greater focus on technical skills by the Government and other partners, which runs the risk of failing to address more fundamental issues as discussed above.** With larger cohorts of students completing primary education and moving on to higher levels of education and with firms complaining about skills shortages, it may be tempting for policymakers to shift more focus and scarce public resources toward vocational education and higher education. However, as discussed further below, these efforts may have little impact on the more fundamental skills problems for the Lao workforce.

**90. Overall spending on education is on the rise, and the composition of spending (by level of education) seems sensible.** Given the large share of population under age 15, its difficult geography, and the education gap with its neighbors, Lao PDR should probably be spending relatively more (as a share of GDP) than its neighbors. As such, recent increases (Figure 4.10) are a welcoming sign. However, spend-

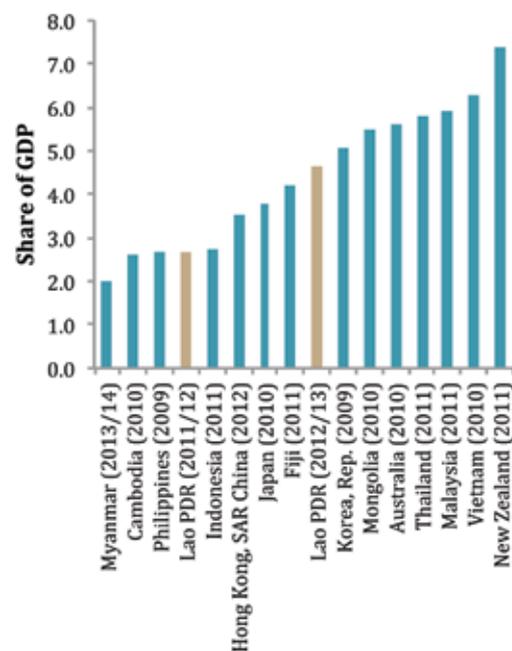
ing more on education is no guarantee for better educational outcomes. Indeed, simply increasing teacher wages (as has been done in recent years) is unlikely to improve sector outcomes. The overall composition of spending (by level of education) remains sensible: most of public spending supports primary education, a tiny proportion goes to tertiary education, and the share spent on pre-primary education is on the rise.

Figure 4.9: Public spending by level of education (%)



Source: World Bank Edstat and Lao Education Sector Plan Mid-Term Review

Figure 4.10: Public spending on education (as share of GDP)



Source: World Bank Edstat and Lao Education Sector Plan Mid-Term Review

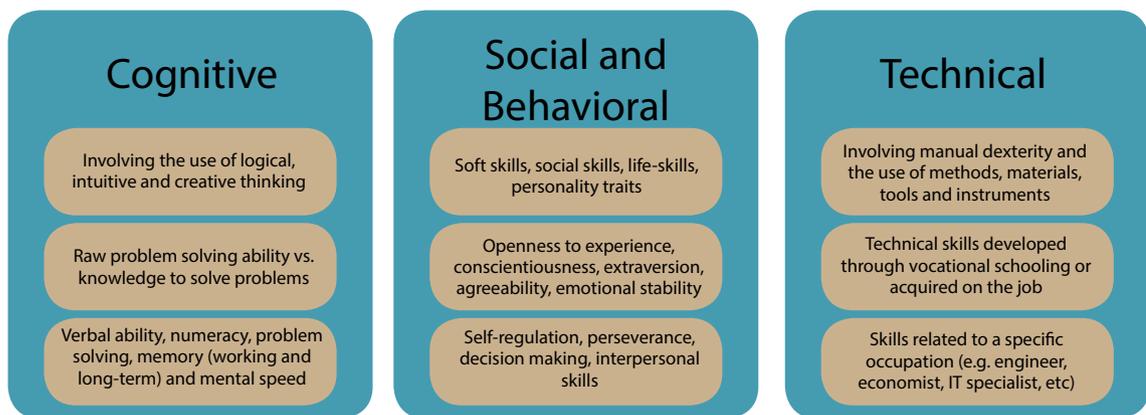
**91. In terms of developing a workforce with the right skills, Lao PDR is using what appears—at least to an outsider—to be a centralized planning approach that is likely based on inaccurate information and therefore does not provide useful guidance.** As part of the five-year plan, economists forecast sectoral GDP and use these forecasts to estimate broad “workforce requirements” (i.e. how many people are needed in each sector), using historical relationships between GDP growth and employment. In attempting to apply the historical relationship between variables to an

evolving economy undergoing structural change (albeit at a slower-than-desired pace), this forecasting is likely highly imprecise. These forecasts, which are not done by smaller sub-sector or by occupation, are then compared to a forecast of the supply of workers (generated from demographic data and student enrollment data). Not surprisingly, the forecasts tend to show that Lao will face a shortage of workers in the future—a misleading result which stems from the fact that high future growth rates are assumed while assuming that yesterday’s poor labor productivity will continue.

**92. Moreover, it seems that in considering skills development issues, policymakers tend to revert to a focus on vocational skills rather than considering the full range of skills that are important for productive employment.** A worker's skill set comprises different domains of skills: cognitive skills, social and behavioral skills, and technical skills (Figure 4.11). Cognitive skills include the use of logical, intuitive, and critical thinking as well as problem solving using acquired knowledge. They include literacy

and numerical ability and the ability to understand complex ideas, learn from experience, and analyze problems using logical processes. Social and behavioral skills capture personality traits that are linked to labor market success: openness to new experiences, conscientiousness, extraversion, agreeability, and emotional stability. Technical skills range from manual dexterity for using complex tools and instruments to occupation-specific knowledge and skills in areas such as in engineering or medicine.

Figure 4.11: The three dimensions of skills sought by employers



Source: Pierre, Sanchez Puerta, and Valerio (forthcoming), STEP Skills Measurement Surveys. Innovative Tools for Assessing Skills



Photo by World Bank, 2008

### III. Recommendations

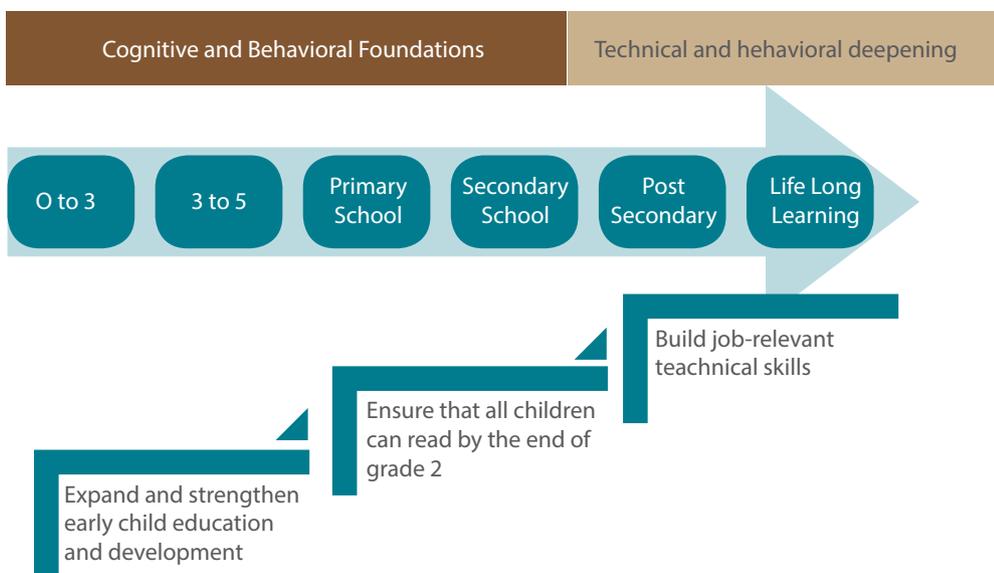
**93. Given how crucial foundational skills are for the future of the Lao workforce, this report recommends staying focused on these basic skills, especially with respect to public resource allocations.**

More emphasis (and public resources) to provide students with more technical skills training is not the solution. Action on multiple fronts is needed to ensure that the Lao workforce is equipped with basic literacy and other skills which will in turn provide the foundation for developing the cognitive, behavioral, and technical skills necessary to be more productive.

**94. Efforts should focus on the critical junctures and windows of opportunity when skills are built.**

A useful approach to skills development is to consider which skills need to be mastered at each stage of learning. Figure 4.12 illustrates the three steps in skills development: (i) promoting school readiness to help children learn in school, (ii) building foundational skills, and (iii) learning job-relevant skills for employability. All three steps are critical to building a skilled workforce, and each step depends on the previous one—behavioral skills feed into and benefit from cognitive skills, and behavioral and cognitive skills can help beget strong technical skills. The recommendations presented below are framed according to these steps in skills development.

Figure 4.12: The steps of skills development



Source: World Bank (2013f)

*STEP 1: Expand and strengthen early childhood development and education*

**95. Investing in early childhood development and education can have a multiplier effect, and public money spent on basic skills has a higher return than money spent for more sophisticated skills.**

As mentioned above, new skills are built upon old skills. Helping young children (3-5 years of age) develop school readiness skills and basic cognitive and behavioral skills is more effective and less costly than trying to rectify problems at a later age. Plus, given the higher private returns to completing vocational and tertiary education, it could be argued that individuals can (and should) be expected to bear a bigger proportion of the costs for higher education.

**96. Much more attention is needed on helping parents (especially disadvantaged and poor parents) make more informed choices for their youngest children, especially with regard to feeding and intellectual stimulation.**

ECE interventions have been shown to be not only one of the most cost-effective interventions in education but also one of the most equitable ones, since the largest impacts of ECE are on disadvantaged populations. This early stage of learning is a critical time for closing gaps between children in poorer and better-off households. If this window of opportunity is missed, children who have not learned the basic skills will continue to fall further and further behind, putting them at a disadvantage for later learning and perpetuating inequalities.

**97. While the government’s plans for ECE are commendable, what is needed is: (i) a stronger focus on the first 1,000 days of life, when the root causes of many of Lao PDR’s problems start; and (ii) a strategy for mobilizing more public and private resources to finance the expansion.** Coverage of ECE services and resources devoted to ECE are still insufficient. Despite the significant investments made in education, Government expenditure for ECE was only 5.4 percent of the total education budget in 2012/13, a much too small proportion given the magnitude of the problem. Greater mobilization of public and private resources is needed to expand coverage.

**98. Expanding services to more and younger children should be a priority, and it will be critical to determine the most effective strategy for delivering quality ECE in each context.** Any initiatives should be based on careful analysis of what is needed to deliver quality ECE and what the costs will be. As described in MOES (2013), social demand for ECE is very strong, so a menu of service options should be made available to communities willing to expand ECE services. For example, in order to expand access to formal kindergarten and pre-primary classrooms for 5 year olds, some provinces have requested a “quick” 30-day program for teacher training in contrast to the 30-week program that is currently being offered in Vientiane. A series of short in-service courses might be a viable alternative to the 30-week course currently offered, which would reduce the cost of expansion significantly. Similarly, multi-age teaching in ECE, in which 3-5 year olds share a classroom with a properly trained teacher,

may prove to be a cost-effective alternative in areas without enough children to sustain a full kindergarten. Another alternative, especially in very remote areas, is non-formal models for 3-5 year olds. Evidence from other developing countries (Indonesia, Mozambique, Philippines) suggest that non-formal ECE can have a similar impact on children’s development for a fraction of the cost. However, the details of implementation matter enormously for the success of these alternative models, so exploring and evaluating what works in the Lao context is crucial for expanding access quickly while ensuring quality of services.

**99. Assessing strategies and interventions for ECE will require defining what “quality” means and measuring whether it is delivered.** The quality criterion is essential for determining what works and does not work. To this end, many countries are using standardized assessments to measure a child’s development across some key domains and to monitor which modalities are working and which are not. These assessments can also be used to track whether services are being provided equitably. As an example, Box 4.1 describes an assessment undertaken in Vietnam to take stock of school readiness among children in public pre-schools. Although kindergarten teachers in Lao PDR are supposed to track 100 items for each child in their class (e.g., “Can the child hold a pen?” “Can the child communicate their needs?”), the information is collected but not used. Developing a simpler form (tracking 10-15 items) and aggregating it up to the school and district level would help provide a picture of child development gaps.

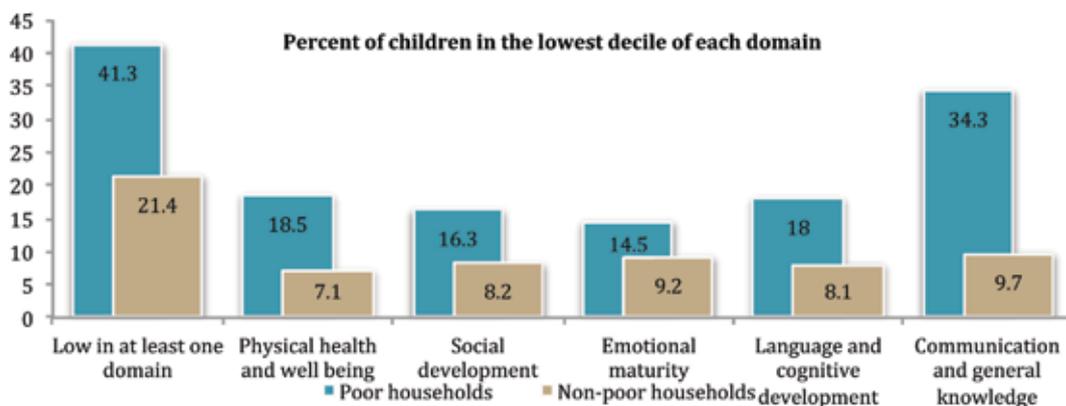
**Box 4.1: Assessing School Readiness in Vietnam**

In 2012, the Ministry of Education and Training in Vietnam assessed school readiness among five-year-old children in public pre-schools. The survey adapted the Early Development Instrument (EDI) (Offord Centre for Child Studies, 2013) to measure the development of children across 5 domains: physical health and well-being; social knowledge and competence; emotional health/maturity; language and cognitive development; and general knowledge and communication skills. The scores for each of the five domains indicate the shares of children who are at various levels of school readiness. Children scoring in the lowest decile in one or more of the do-

main are considered “vulnerable” in terms of school readiness. While the EDI cannot be used to diagnose whether a particular child is ready for school, it can be used to identify the shares and types of children who are most vulnerable to not being ready.

The results of the 2012 assessment in Vietnam confirmed that much of the inequality in learning outcomes observed among children in primary school and beyond are established even before formal schooling begins. The results are summarized in the following figure.

Figure: Percentage of Vietnamese children vulnerable in terms of school readiness, by household poverty status and domain



Source: World Bank (2013f).

**100. Given the negative impacts of stunting on cognitive development, chronic malnutrition must be addressed as an integral part of an ECE strategy.** Fixing Lao PDR's literacy problems must begin by tackling the high rates of severe malnutrition. Policymakers across ministries must ensure that nutrition is integrated as a key component of early years' programming, including in ECE. Interventions to stimulate the child's development (such as play, reading to the child, and listening to music) should also be integrated into early years' programs in order to mitigate the impacts of malnutrition on cognitive development.<sup>30</sup>

**101. The likely causes of malnutrition are broad and cross-sectoral but mostly preventable.** Causes include: poverty leading to limited dietary diversity, poor infant and child feeding practices, poor sanitation indicators and related diarrhea, micronutrient deficiencies, chronic childhood illnesses, and maternal anemia. Malnutrition can be prevented by focusing on improving sanitation and reaching pregnant mothers with nutritional supplements and teaching them about the importance of three simple feeding practices:

- early initiation of breastfeeding within one hour of birth;
- exclusive breastfeeding for the first six months of life; and
- the introduction of nutritionally adequate and safe complementary (solid) foods at six months, together with continued breastfeeding up to two years of age or beyond.

*STEP 2: Ensure that all children can read*

**102. Reading should become a national obsession for Lao PDR.** A strong, focused push is needed to help all young children master the basic skill of being able to read. The objective should be to ensure that all children learn to read by the end of grade 2, which may seem like a daunting task but which is essential for building a skilled and productive workforce.

**103. Experiences from other countries point to interventions that can be particularly effective in promoting early grade reading.** It will be important for Lao PDR to identify the specific interventions that will have the most impact according to its country context and the particular needs of its population, as identified through instruments such as the Early Grade Reading Assessment. However, as described

<sup>30</sup> Save the Children (2013).

in greater detail in Gove and Cvelich (2011), international experience suggests some common areas for intervention:

- **Training teachers on how to teach reading**, as teachers in low-capacity countries oftentimes lack the basic knowledge and support for teaching reading. Interventions could include pre- and in-service programs such as training on specific pedagogical skills for teaching alphabets and comprehension, provision of reading lesson plans and teaching aids (if they are instructed on how to use them), and coaching in the classroom to help teachers adopt good practices. Such techniques can have swift and dramatic results: in Liberia, South Africa, and Mali, student reading gains were two to four times higher than those of control groups in only a matter of months.
- **Maximizing instructional time in the classroom** to ensure that reading receives particular attention as a subject, with time that is explicitly for reading instruction. Once teachers are equipped with the proper training, materials, and guidance, they should be held accountable through curricular standards and supervision for dedicating time to teaching reading.
- **Putting appropriate books in the hands of children and mobilizing communities to use them.** To foster literacy, books are important not only in school but also at home. As described in Gove and Cvelich (2011), a study in Ethiopia found that having a textbook boosted children's oral reading fluency by 9.6 words per minute, and having other books at home boosted their fluency by 8.3 words per minute (Piper, 2010). Parents should encourage reading as a daily activity at home so children can practice on a regular basis. In the case of Lao PDR, additional resources could be channeled to improving the availability of reading materials in the Lao language, as lack of Lao language books poses a major barrier to learning to read.
- **Implementing appropriate language policies.** As summarized in Gove and Cvelich (2011), studies have found that primary education that begins in a child's mother tongue helps students

gain early reading skills more quickly, making them more likely to attend school and less likely to drop out or repeat a grade. It also provides a foundation for learning in a second language. Thoughtful and thorough planning is needed to ensure that language policies in schools are implemented effectively.

- **Measuring reading skills** to help determine needs and design effective responses. Reading tests should be targeted at the early grades, which are critical windows of opportunity for learning how to read as discussed above. The tests should also be useful for teachers to inform their instruction, for supervisors to help monitor teachers, and for communities and policymakers to know whether the objectives are being achieved.

#### STEP 3: Building job-relevant technical skills

**104. An important part of workforce development is having a well-run vocational school system, but creating a well-run vocational school system is much more difficult than for other forms of education, particularly for countries with limited government capacity.** Compared to other types of schools, vocational schools tend to be more expensive to build since they require more tools and equipment, and they are more expensive to run because they usually need smaller classes, more non-teaching staff, and more non-salary inputs for instruction. They are also more difficult to staff as they need teachers with relevant and up-to-date professional experience, and these types of people tend to be gainfully employed in the private sector. Perhaps most importantly, designing appropriate vocational skills programs and teaching content is much more difficult because the skills needed by the private sector keep changing. In addition, management of the TVET sector is more challenging compared to other education sub-sectors because it involves a complex set of government agencies, stakeholders, and providers. In short, creating a well-run vocational schools system is very challenging, especially in countries where ministries of education have limited capacity and resources and are struggling to fix widespread problems in their general education sector.

**105. Lao PDR's vocational education system does not seem to be as responsive as it needs to be and suffers from "disconnects" among the schools, employers, and students.**

As described in World Bank (2013e), vocational schools have limited and mostly informal interactions with employers and students, and curricula and teaching materials are generally developed without employer or student inputs. No formal mechanisms are available for firms to provide feedback to schools on their programs or quality of teaching. Moreover, public vocational schools have no financial incentive to redesign or close down programs with declining student numbers: the Government pays for their teachers, irrespective of whether a class has 10 or 30 students. These schools therefore appear to be disconnected from labor markets and student needs and remain largely supply-driven, which increases the potential for skills mismatches.

**106. One challenge Lao PDR faces in creating a more demand-driven vocational education system is the lack of a dynamic and organized private sector.**

A responsive flexible training system is a result of interaction between industry and government and between demand and supply. For the system to become more demand-driven, more of the private sector's help is needed to define the demand (i.e. how many workers are needed, where, and with what competencies). Vietnam provides an interesting example of how the Ministry of Labor, Invalids and Social Affairs has actively reached out to industry experts to help define skills standards (see World Bank 2013h).

**107. While this report argues for greater attention on foundational skills, as far as vocational schools are concerned, a more strategic role for the Government is recommended.**

Given the scale of the problems with foundational skills and the challenges of building a well-functioning vocational school system, this report recommends focus more attention and public resources on improving foundational skills. In terms of vocational schools, the recommendation is for the government to focus less on running the schools (i.e. being a direct provider) and more on taking on a stronger strategic role by developing policies, setting standards, investing in training materials

and instructors, improving public information about the training system, and carrying out training evaluations. World Bank (2013e) suggests several channels for doing so, including:

- **Fostering closer interaction between the private sector and vocational schools.** For example, employers could contribute to the design of programs and curricula by providing feedback on courses, assisting in decisions on equipment purchases, lending equipment, and developing internship programs. The Government could also encourage partnerships between educational institutions and firms to design programs or facilitate public-private partnerships between large employers and schools. Neighboring countries provide examples of how to foster such closer networks. For instance, Thailand created a joint committee—comprised of educators and representatives from the Federation of Thai Industries, the Chamber of Commerce, and other occupational associations—to enhance collaborative work on a competency-based curriculum. Similarly, China is actively strengthening school-industry linkages in a number of communities in provinces such as Guangdong, Liaoning, Shandong, and Yunnan.
- **Strengthening monitoring and evaluation capacity.** Improved labor market information is needed to ensure the relevancy of skills development. Such information could be obtained through annual labor force surveys, consultations, and tracer studies to track the employment outcomes of higher education graduates.

**108. Furthermore, the government could provide support for private sector involvement in skills development for specific high-growth manufacturing or services subsectors.**

For example, public subsidies could be warranted for youth apprenticeship programs or public-private partnerships among the private sector, colleges, and business. However, to ensure good governance, the benefitting firms should be required to make considerable investments in the schemes themselves and agree to transparent accountability and performance measures.

**109. Several OECD countries provide examples of how data on graduation can be collected and disseminated.** Norway has tracked such data since 1972; Italy since 1998; and the Netherlands since 1989. In the Netherlands, almost all graduates of higher education institutions are surveyed 1.5 years after graduation. The survey collects comprehensive information on a range of different topics, including information on the school-to-work transition (asking such questions as: How long did it take to find a job? Did it

involve unemployment spells?); the type and quality of employment, if any (e.g., sector and requirements for education and skills); and students' satisfaction with the education they have completed (Did it provide a solid basis for entering the labor market? Did it develop the relevant skills? Did it achieve the right mix between practical and theoretical knowledge?). Table 4.2 shows the types of information collected by the survey.

Table 4.2: Information Collected from Tracer Study of Dutch University Graduates, 2007

	Duration of job search (months)	Full-time employment (%)	Unlimited term contract (%)	Monthly gross income (euros)	Managerial or professional (% ISCO 1 or 2)	High job satisfaction (%)
	Mean	Mean	Mean	Mean	Mean	Mean
Science and math	0.7	88.4	45.6	2499	83.6	77.5
Medicine and health	0.7	79.0	41.0	2904	82.6	81.7
Engineering	1.0	94.4	66.2	2772	87.4	72.8
Economics	1.0	96.1	71.3	2954	70.3	70.1
Law	1.2	92.7	57.5	2864	87.8	70.2
Humanities and arts	1.2	59.1	43.0	2188	66.0	61.3
Social sciences	1.3	60.6	45.4	2317	72.0	65.4
Agriculture	1.5	86.7	45.6	2137	84.2	71.2

Source: Table provided by the Research Centre for Education and the Labour Market (ROA), The Netherlands, 2008 (reproduced from World Bank, 2012)

- **Using social marketing to facilitate better skills matching.** Social marketing could promote programs and courses with high social returns, steering students away from lower-return areas such as business administration, accounting, and economics to high-need areas such as electronics and construction. Marketing techniques could also be used to increase awareness about TVET and attract students toward the sector.

However, social marketing may not address the root causes of low student enrollment in TVET. Lack of interest may be due to other factors, such as the current shortcomings of the TVET system as described above which make pursuing TVET less attractive. Another possibility is that, given the relative stagnation of the manufacturing sector, students may not be interested in a TVET degree that is aimed at facilitating entry into the manufacturing sector. No amount of social marketing will help resolve these issues, which must be addressed through other channels.

## IV. Conclusion

**110. Given the wide range of challenges in skills development, it will be important to adopt a strategic approach to reform and focus on the most critical gaps.** Reflecting the wide range of challenges in the education sector, the Government has a very broad and ambitious sector review. Given the limited resources available, it will be important to prioritize the reforms and allocate resources accordingly. Careful sequencing will also be important—for example, a greater focus on literacy skills will be a necessary basis for other improvements as discussed above. Chapter 5 reviews the priority reform areas as laid out in Chapters 2, 3, and 4 and proposes next steps for moving forward.



## Chapter 5: Conclusion

## I. Summary of Policy Recommendations

**111. To summarize, in order to achieve broad-based growth and poverty reduction, Lao PDR must channel greater resources toward tackling key workforce and productivity challenges.** As discussed in the previous chapters, this development agenda goes much deeper than the vocational skills issues that have drawn so much attention, although improving vocational skills is part of the overall agenda. Lao PDR must achieve a more balanced approach to development, avoiding overreliance on the natural resources sector and creating an environment that helps farm and non-farm businesses flourish. Growth of employment-generating sectors, combined with improvements in basic literacy and other skills to allow workers to move into more productive opportunities, will contribute to stronger growth, enhanced competitiveness, and improved livelihoods for the Lao population.

**112. Specifically, a three-pronged approach is needed to (i) increase agricultural productivity, (ii) create more attractive off-farm jobs, and (iii) ensure basic literacy skills.** These three areas are all critical to addressing Lao PDR's workforce and productivity challenges, and they are all inter-related. Higher agricultural productivity is needed to improve livelihoods for the majority of the workforce that is currently engaged in agriculture as well as to free up labor to move into the more productive "modern" sectors. Employment opportunities in these "modern" sectors will need to be expanded to accommodate the increased flow of workers out of the agricultural sector, which means looking beyond the natural resources sector and fostering the growth of employment-generating manufacturing and services subsectors. At the same time, it will be important to ensure that the Lao workforce is equipped with the basic skills to be able to move into the jobs that are created.

**113. While increasing agricultural productivity is arguably the most important and urgent priority for Lao PDR's agrarian economy, reforms in the other areas will also be needed relatively quickly.** As agricultural productivity increases and increasing numbers of youth enter the labor market, the economy will be under greater pressure to produce better-quality employment opportunities. However, creating a business environment that attracts FDI and encourages firms to invest is not accomplished overnight. At the same time, firm demand for more skilled workers will increase. Postponing efforts to combat malnutrition and promote literacy will be very costly, as today's illiterate children will not be tomorrow's productive workers. Thus, although boosting agricultural productivity is a top priority, Lao PDR cannot afford to wait in fostering a more conducive business environment and addressing the major skills gaps, as the impacts of such reforms take time to materialize.

**114. Within each of the three recommended areas of focus, this report identified a set of key actions which will need to be prioritized and sequenced carefully.** The priority actions within each area are summarized in Figure 5.1. Chapters 2, 3, and 4 provided ideas and proposals for measures that could be undertaken for each priority action. Giving equal and immediate attention to all areas is both impossible and undesirable, and spreading resources thinly across a multitude of initiatives will dilute their impact. To maximize impact with the limited resources available, reform measures will need to be planned and sequenced carefully according to their relative urgency and importance and the feasibility of undertaking them in the short, medium, and long term.

Figure 5.1: Summary of recommended actions



## II. Areas for Further Work

**115. In order to ensure that reforms will be relevant, effective, and targeted appropriately, it will be critical to improve the analytical basis for reforms.** For example, policies affecting the workforce should be based on a complete and accurate picture of labor market dynamics—what is happening, who is affected, what the implications of potential policies might be.

**116. However, crucial information on sectoral employment, migration, and other labor market indicators are lacking.** As discussed in Annex 1, the task of analyzing labor market dynamics in Lao PDR is challenging given the shortcomings in the available survey data. Lao PDR lags behind comparator countries in collecting such labor force data, as shown in Table 5.1.

Table 5.1: Country comparison of labor force data collection

	Survey name	First year the survey was conducted	Periodicity	Sampling frame updating frequency
Thailand	Labor Force Survey	1963	Monthly	2 years
Indonesia	National Labour Force Survey	1986	Quarterly	10 years
China	Annual Sample Survey on Labour Force	1989?	Yearly	?
Cambodia	Cambodia Socio-Economic Survey	1993-1994	Yearly	Continually
Vietnam	Labor Force Survey	1996	Yearly	Not updated with a specific frequency
Lao PDR	Labor Force Survey	2010	Conducted once so far	10 years

Note: Question marks indicate information not available on LABORSTA Internet.

Source: International Labor Organization, LABORSTA Internet. Available from [http://laborsta.ilo.org/applv8/data/SSM3\\_NEW/E/SSM3.html](http://laborsta.ilo.org/applv8/data/SSM3_NEW/E/SSM3.html) [Accessed Aug. 30, 2013]. Presented in World Bank (2013c).

**117. Much greater efforts are needed in collecting better data to enable meaningful and accurate analysis for policymaking.** Most importantly, Lao PDR needs more frequent household (or labor) surveys that can provide insights on changes in employment and wages. With an economy growing at

8 percent, a labor force expanding by nearly 100,000 every year, and rapid wage growth (which appears to outpace labor productivity), policy makers need more frequent data than the current situation of getting LECS data every five years.

**118. Along with improved data, further analytical work is needed in a number of areas to help prioritize reforms.** These areas, which will likely require gathering of more data and information through surveys and other channels, include:

- **Identifying other barriers to worker mobility.** While this report focused on the wage incentives for workers to move between sectors, little analysis has been conducted to date on other barriers that may affect worker mobility. In China, for example, numerous policies and institutional barriers have affected the integration of rural migrants into urban areas. Such barriers include the national household registration system, which has effectively prevented migrants and their families from having access to basic services in the receiving areas, as well as institutional barriers such as lack of portability in pensions which might discourage workers from moving to a new locality.

As discussed in Chapter 3, further analysis is needed to determine what factors, if any, beyond wage incentives influence whether workers in Lao PDR move to new jobs and new geographic areas. If there are numerous barriers to mobility, reforms that fail to address all the barriers are less likely to be successful. Given the basic skills gaps in Lao PDR, it is possible that information barriers may affect inter-sectoral mobility. Language barriers as well as poor transport infrastructure may also discourage workers from moving from rural to urban areas and need to be studied further.

- **Exploring additional sectors/subsectors that can contribute to growth and employment generation in rural areas.** As agricultural productivity increases, one area that offers significant potential for growth and employment generation is the rural off-farm sector. However, little attention has been given to the potential of this sector. The Lao Agricultural Census indicates that alternative employment opportunities in rural areas are expanding and that many people have secondary jobs. The percentage of the farm population aged 15 years and over who did their main job work on their own holding as well as other work increased from 24 percent in 1998/1999 to 40 percent by 2010/2011. Many worked in other family businesses, while 249,000 of them worked as non-farm employees (Agricultural Census

Office, 2012). Further research is needed to understand the types of employment in the rural off-farm sector and the potential for future growth in specific subsectors, segments, and markets (domestic consumption and exports) to determine where efforts should be focused given the Lao context.

- **Understanding the factors underlying the rising wages in the manufacturing sector despite slow productivity gains.** As discussed in Chapter 3, rising labor costs have not been matched by productivity gains in the manufacturing sector, which has lowered profitability for firms and limited their growth. Chapter 3 points to a number of possible factors behind this phenomenon, such as pressure on wages from the natural resources sector boom, scarcity of particular skills, rising public sector wages, and increases in the minimum wage. However, the relative importance of the various factors is unknown, making it difficult to determine the appropriate policy response. Further research is needed to examine wage setting practices and understand the factors at play.
- **Identifying specific measures to promote basic literacy.** As a follow-up to the early grade reading baseline assessment in 2012, a more in-depth case study analysis was conducted for a subset of schools in Lao PDR.<sup>31</sup> Although replicating the conditions in the high-performing schools will not necessarily yield the same outcomes in low-performing schools, the study proposed areas for further research that could help identify critical interventions for the early grade reading effort, such as:
  - o the effect of classroom management techniques on learning outcomes;
  - o the effect of classroom activities on learning outcomes;
  - o the effect of school amenities such as electricity, clean water, and bathroom facilities on learning activities;
  - o how to cater to and incorporate students of ethnic minority into the teaching and learning activities of the classroom in an inclusive way;
  - o how language, dialect, and accent are managed, observed, and interact in the classroom and their effects on learning.

<sup>31</sup> See Machuca-Sierra (2014) for more details.

More generally, deeper analysis of the bottlenecks in the education service delivery system would also help inform efforts to improve basic literacy and promote early grade reading.

- ***Examining the implications of regionalization.***

Thanks to regional cooperation initiatives, Lao PDR is becoming more integrated with its neighbors and other countries in the East Asia region. This regionalization has implications for the Lao economy, both in terms of more open trade (and the opportunities it presents for development of the manufacturing sector) and employment. In

2015, ASEAN will allow for the free movement of skilled labor, opening up new opportunities for Lao PDR's skilled workers to go abroad and for Laotian firms to recruit skilled workers from other ASEAN nations. This may have implications for Lao PDR if the shift of labor from rural to urban areas and across sectors continues to be slow. As borders become more open, better information is needed on how many workers are leaving Lao PDR, where they go, and what types of employment they are engaged in in order to understand and anticipate workforce transitions.



## Annex 1: Lao PDR Labor Market Data Issues

Analyzing movements in employment, changes in productivity, and wages is a major challenge in Lao PDR for two reasons: (i) the data needed for such analysis is only available every five years; and (ii) Lao PDR has very few wage earners, making the sample to be examined very small. This annex discusses these limitations in more detail.

In terms of data, for the decade spanning 2003 to 2013, only one data source is reliable enough to enable a meaningful investigation of Lao PDR labor market dynamics across time, and this data source provides only three data points that can be analyzed. This reliable data source is the latest three rounds of the Lao Expenditure and Consumption Surveys (LECS3, LECS4, and LECS5), which were conducted in 2002/03, 2008/09, and 2012/13 by the Lao Statistics Bureau (LSB). Two additional sources of labor market data that could potentially have been used in this report are the Lao Labor Force and Child Labor Survey 2010 (LFS 2010), carried out by the LSB with assistance from the International Labour Organi-

sation (ILO), and the World Bank's Skills Toward Employment and Productivity (STEP) Household Survey conducted in 2012. However, careful investigation of these datasets reveals some major shortcomings which make some of them ill-suited for analysis of wage movements, in particular.

Table 1 depicts the labor force participation and unemployment rates calculated using the three rounds of LECS, the LFS, and the STEP survey data. Immediately apparent are the much lower participation rate figure obtained from the LFS and a higher one from the STEP than what is observed in the three LECS. Given the consistent story across the three large LECS surveys, the participation rates from LFS and STEP are likely less reliable. Moreover, the unemployment rates calculated using the LFS and the STEP also appear to be much lower. One obvious shortcoming of the STEP is the very small sample size which would very likely lead to poor statistical inference in more disaggregated analyses.

Table 1. Labor Force Participation and Unemployment Rates (15-64 years old)

	LECS III 2003	LECS IV 2008	LFS 2010	STEP 2012	LECS V 2013
Labor force participation rate	92%	88%	83%	91%	88%
Unemployment rate	1.45%	2.96%	0.69%	0.48%	3.13%
Sample Size (15-64 years old)	26,778	27,877	36,021	2,847	26,728

Several inconsistencies inherent in the LFS and STEP survey data can also be seen in Table 2, which shows the deployment of labor hours in different economic activities across time periods. The results show that the shares of labor hours employed in agriculture in

2010 and 2012 are too high, while the shares in manufacturing and construction and services are too low compared to the trends estimated using the three rounds of the LECS data.

Table 2. Labor Hour Share of Employed Workers by Sector (15-64 years old workers)

	LECS III 2003	LECS IV 2008	LFS 2010	STEP 2012	LECS V 2013
Agriculture	68%	63%	71%	68%	61%
Manufacturing	6%	8%	5%	5%	8%
Mining, electricity, water & gas	0.26%	0.52%	0.95%	0.04%	0.77%
Construction & services	25%	28%	23%	27%	30%

A significantly more serious problem occurred in the LFS collection of key wage income variable. The very first question in Module 3 (Current Activity Status) asked employed workers for their employment status, categorized into five groups as follows: weekly, monthly, daily, or other types of wage earners, as well as non-wage earners. The question that immediately followed asked the amount of money these individuals received from carrying out these activities but without specifying whether the amount reported was on a weekly, monthly, or daily basis. The mean earnings reported by these individuals for each employment status is presented in Table 3. Given the

ambiguity of the two questions, it is highly likely that some individuals—for example, in the “Daily wage earners” category—would have reported their wage income on a daily basis, while others would have reported it on a monthly basis. The problem from an analytical perspective is that there is no way of ascertaining what, in fact, individuals reported. This is why the amount of 185,867 Kip seems to be much too high for an average daily rate, while at the same time it is much too low for a monthly rate. Similar inconsistencies can also be seen for other employment status categories.

Table 3. Mean Earnings by Employment Status (LFS 2010) -15-64 years old (constant 2008 Lao Kip)

Status in Employment in Main Work	Sample size	Mean earnings
Weekly wage earners	106	602,283
Monthly wage earners	3,621	987,749
Daily wage earners	540	185,867
Others	201	1,580,395
Non-wage earners	6	3,716,960

The wage income variables from the LECS and the STEP survey are much more reliable in comparison, since the surveys did explicitly ask individual workers for their monthly wage income. The average monthly

wages (except for the LFS data as discussed above) across the time periods calculated using the various surveys are presented in Table 4.

Table 4. Mean Monthly Wage (Except for LFS 2010) – 15-64 years old (constant 2008 Lao Kip)

Year	Sample size	Mean monthly wage
2003	4,597	990,235
2008	2,851	845,197
LFS 2010	4,474	910,306
STEP 2012	663	1,135,101
2013	4,386	1,199,657

In terms of the number of wage earners, the small sample sizes of individuals who reported their wage income is a concerning issue for all datasets (see Table 4). The problem is most severe for the STEP household survey with a sample size of 663 in 2012, which is much too small for any meaningful analysis at more disaggregated levels.

Data inconsistencies in other dimensions can also be seen in Tables 5 and 6, which show average weekly working hours and labor force educational attainment. The LFS and the STEP survey indicate that the Lao labor force worked much longer hours than the three rounds of LECS would suggest. Using these labor supply figures would clearly cause labor productivity figures (output/labor hours) to be thrown off significantly.

Table 5. Mean Weekly Hours for Employed Workers (15-64 years old)

Year	Sample size	Mean weekly hours
2003	22,815	37.7
2008	23,509	38.7
LFS 2010	29,370	48.3
STEP 2012	2,425	58.5
2013	21,903	37.6

Table 6. Labor Force Educational Attainment (15-64 years old)

	2003	2008	LFS 2010	STEP 2012	2013
Some primary or lower	49%	39%	38%	38%	35%
Complete primary	18%	21%	22%	27%	22%
Lower secondary	18%	19%	20%	16%	21%
Upper secondary	9%	12%	10%	14%	12%
Tertiary	5%	8%	10%	5%	10%

It is due to these reasons that this report has relied much more consistent picture of labor market solely on the three LECS datasets, which provide a patterns across the decade under study.

Annex Table 1: Sectoral wages, prices and labor productivity

	Agriculture	Manufacturing	Construction & services	Economy-wide
<b>Labor Productivity or Output per Labor Hour (Kip/Hour) - current prices</b>				
2003	2,094	4,923	5,842	3,476
2008	2,447	5,916	6,910	4,431
2013	2,543	8,535	8,349	5,788
<b>Labor Productivity or Output per Labor Hour (Kip)- 2002 prices</b>				
2003	2,094	4,923	5,842	3,476
2008	2,447	5,916	6,910	4,431
2013	2,543	8,535	8,349	5,788
<b>Output price index (2002=100)</b>				
2003	113	110	123	117
2008	169	143	171	175
2013	214	166	229	214
<b>Relative Output Price (sector output price/agg output price)</b>				
2003	0.963	0.940	1.049	1.000
2008	0.968	0.818	0.977	1.000
2013	0.998	0.775	1.068	1.000
<b>Nominal Wages by Sector (Nominal) - Kip/hour (composition-adjusted secondary-educated labor)</b>				
2003	2,589	4,831	4,843	3,531
2008	3,034	4,950	5,351	4,539
2013	4,901	10,459	8,903	7,619
<b>Real Wages by Sector (2012 Lao Kip) - Kip/hour (composition-adjusted secondary-educated labor)</b>				
2003	3,687	6,879	6,896	5,028
2008	3,034	4,950	5,351	4,539
2013	4,104	8,759	7,456	6,380

Source: Authors' calculations based on LECS IV and LECS V



Photo by Stan Fradelizi / World Bank, 2011

## Annex 2: Background papers and recent World Bank reports used for LDR 2014

This report benefited greatly from numerous background papers and recent World Bank reports on Lao PDR. This annex provides a brief overview of some of the papers that provided an analytical basis for this report.

### *Background Papers*

**World Bank (2013), “Lao PDR Labor Market Dynamics and Structural Transformation” [unpublished]. Lao PDR has experienced high GDP growth and rapid changes in the structure of the economy over the last couple of decades.** This background paper looks back at the transformations that took place within the Lao labor market in the past two decades in order to inform future economic policy. It focuses in particular on living standards, following four non-exclusive channels for improving living standards through transformations of the labor market: (1) changing sectors; (2) changing places; (3) investing in higher productivity; and, (4) investing in job quality. It analyzes data from numerous sources including LECS (various years), and the World Development Indicators.

**Dilaka Lathapipat (2014), “What Accounts for the Differences between Labor Market Structural Transformation in Lao PDR and Thailand?”** This paper uses household survey and other data from Lao PDR and Thailand to evaluate the dynamics of labor market structural transformation and their contribution to aggregate labor productivity growth over different time periods. The comparison between the two countries is interesting due to the near-identical composition of labor hours employed in various economic sectors in Lao PDR in 2003 and Thailand in 1986. However, the paper shows that the two economies were otherwise structurally very different in important ways.

### *Other Recent Reports*

**World Bank, IRRI, and FAO (2012), “Lao PDR Rice Policy Study.”** This study is a first attempt to analyze the rice sector in Lao PDR to support evidence-based policy decisions regarding the rice sector. It combines a review of existing secondary evidence with new analysis and technical expertise. It includes, among others: (i) a new analysis of household survey data from LECS III and IV to understand per capita rice consumption trends; (ii) a comprehensive farm-level and miller profitability analysis; (iii) a policy analysis, including a calculation of historical rice producer support estimates (PSEs) as a way to evaluate public sector support policies for the rice sector; and (iv) a scenario analysis for future sector evolution based on various alternative public investment options, which are evaluated in terms of their relative efficiency.

**World Bank (2013), “Skills for Quality Jobs and Development in Lao PDR: A Technical Assessment of the Current Context.”** This report aims to 1) provide critical information to the Government about existing skills gaps in Lao PDR; 2) to provide the Government and steering committee that will revise the Human Resource Development Strategy 2000-2020 (and link it to the 8th NSEDP) with evidence of the current skills situation in the country, to better inform decisions and human resource planning for the future; and 3) to provide the Government, World Bank, and other development partners a baseline of skills indicators against which to measure progress going forward. Primary sources used to inform the analysis included: the Skills Towards Employment and Productivity (STEP) household survey (which included an assessment created by the Educational Testing Services (ETS)), the STEP employer survey (which included regular Enterprise Survey questions), a survey of 29 educational institutions in Lao (mostly TVET), and a Tracer Survey of recent graduates. Moreover, secondary sources included the Labor Force Survey and LECS III and IV.

**World Bank (2014), “2012 Lao PDR EGRA Survey Report” [draft].** This report summarizes the results of the Lao language Early Grade Reading Assessment carried out in October 2012. The analysis of student data included descriptive statistics (means and standard deviations) to measure average levels in basic reading skills; logit models were used to determine which student and teacher-specific factors have a statistically significant relationship with the acquisition of basic reading skills. The report presents the most relevant results as well as policy implications for reading instruction and teacher professional development in the country.

**World Bank (2014), “Lao PDR Investment Climate Assessment 2014: Policy uncertainty in the midst of a natural resources boom” [draft manuscript].** This is the third Investment Climate Assessment for Lao PDR and is based on analysis and interpretation of data from an enterprise survey undertaken in late 2012. The report reviews the current economic context of Lao PDR then analyzes firm-level performance and business environment constraints as identified by firms, looking in particular at the four most significant business environment constraints that firms face in Lao PDR as shown by the data: skills, access to finance, regulatory compliance, and corruption.



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