Lao PDR Investment Climate Assessment
Policies to Promote Growth in the Non-Resource Sectors

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THE WORLD BANK
CURRENCY EQUIVALENTS

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

ABBREVIATIONS AND ACRONYMS

ADB Asian Development Bank
AFTA Association of Southeast Asian Nations Free Trade Area
ALGI Association of Lao Garments Industries
BoL Bank of Lao PDR
CMT Cut, Make and Trim
EdL Electricité du Laos
EU European Union
FDI Foreign Direct Investment
GDP Gross Domestic Product
GNI Gross National Income
GSP Generalized System of Preferences
GIZ Deutsche Gesellschaft für Internationale Zusammenarbeit
ICA Investment Climate Assessment
IFC International Finance Corporation
ISO International Organization for Standardization
LNCCI Lao National Chamber of Commerce and Industry
LNTA Lao National Tourism Association
LPI Logistics Performance Index
MFA Multi Fiber Agreement
MoIC Ministry of Industry and Commerce
MoLSW Ministry of Labor and Social Welfare
MPI Ministry of Planning and Investment
MSME Micro, Small and Medium Sized Enterprise
NPL Non Performing Loan
NSEDP National Socio-Economic Development Plan
NTR Normal Trade Relations
ODA Official Development Assistance
PDR People’s Democratic Republic
PPP Purchasing Power Parity
ROSCA Rotating Savings and Credit Association
SMEs Small and Medium Sized Enterprises
SOE State Owned Enterprise
TFP Total Factor Productivity
TVET Technical and Vocational Education and Training
UNDP United Nations Development Program
UNIDO United Nations Industrial Development Organization
VAT Value Added Tax
WTO World Trade Organization
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The Second Lao PDR Investment Climate Assessment identifies the key constraints of the country’s non-resource sector firms. This Assessment summarizes the results of a national survey conducted in late-2009 and draws on extensive interviews with policymakers and practitioners. Survey results reveal the nature of constraints that various non-resource sector firms in Lao PDR currently face. The results provide an analysis of the firms’ performance and productivity. Supporting an international exchange of knowledge, this survey’s results have been compared to numerous studies conducted by the World Bank in over 100 developing countries, which share similar methodological approaches.

Due to rapid economic growth in recent years, Lao PDR has emerged from low income to middle-income country status in 2011, according to the World Bank. Following the introduction of the New Economic Mechanism and the implementation of reforms in 1986, annual per capita incomes have more than doubled since 1990. By 2010, per capita incomes reached US$1,010. As Lao PDR’s economy developed, the country’s poverty headcount was significantly reduced from 46 percent of the population in 1992 and 1993 to 28 percent in 2007 and 2008.

To a large extent, the natural resources sector, particularly hydropower and mining, has driven recent economic growth. This sector, which consists of mining, quarrying, and energy contributed more than 2 percent to the country’s average annual real growth rate between 2005 and 2009. Natural resources have therefore become the largest and fastest growing export in Lao PDR. Copper exports alone account for more than half of the country’s total exports. This boom in natural resource exploitation has brought significant benefits to Lao PDR’s economy in the form of higher economic growth, an increase in fiscal revenues, infrastructure improvements, and improvements in environmental legislation and institutions. At the same time, an over reliance on the sector as a primary source of economic growth poses serious risks to the sustainability of the country’s long-term development.

At the macroeconomic level, long-term risks are twofold. To begin, there is a risk of increased volatility as the economy becomes more susceptible to external shocks driven by commodity price movements. Secondly, there is a risk that the sector may exhaust labor capacities and capital gain in the short-term, subsequently preventing long-term competition in other sectors.

The development of the non-resource sector is essential to ensure sustainable and inclusive growth in Lao PDR. Non-resource sectors are more stable than resource sectors, and provide more long-term employment. The non-resource sector is expected to contribute more than half of Lao PDR’s real GDP growth and 75 percent of the GDP in the medium-term. To achieve these results, policies in Lao PDR should focus on creating a positive enabling environment and that supports the development of the non-resource sectors.

Based on Lao PDR’s per capita income, this Assessment’s survey analysis demonstrates that labor productivity is lower than in neighboring countries and lower than in countries with a similar level of income. Labor productivity in Lao PDR is slightly lower than in Cambodia and Vietnam and significantly lags behind the leading countries in the region such as China, Malaysia and Thailand. Even though labor costs are low in Lao PDR, data suggests that national unit labor costs are roughly comparable to many comparator countries, but are higher than in China and Thailand. Enhancing the competitiveness of the non-resource sector is essential to enable Lao PDR to compete with regional and international markets.

Dissimilar to comparator countries, exporting firms confirm lower levels of productivity than non-exporters. In most comparator countries, exporters are generally more productive than non-exporters; large firms are more productive than non-exporters; and foreign-owned firms are more productive than domestic firms. This is not the case in Lao PDR. Although the median foreign-owned firm is slightly more productive than then median domestic firm, non-exporters are more productive than exporters and small firms are more productive than large firms. This finding is driven by a number of factors. To begin, export firms predominantly focus on garments, furniture, and wood sectors.
where production is linked to relatively low skilled, labor-intensive work. In addition to sector differences between exporters and non-exporters, it is also possible that low domestic market competition affects measured productivity. When domestic markets lack competition, monetary measures of output appear artificially high for domestic firms. In contrast, firms competing on international markets face greater competition and therefore, lower prices. Finally, there is a possibility that non-natural resource based sectors in Lao PDR are beginning to experience some of the negative impacts associated with the natural resources boom.

Taxation, access to finance, and inadequate skills are identified as the key growth constraints by most firms in Lao PDR. A significantly greater number of firms view these areas as problematic compared to in other countries in East Asia. Thirty percent of firms, or three-times the number compared to other countries in East Asia, view the tax rate as a major constraint. Ranking slightly higher than the regional averages, twenty percent of firms in Lao PDR report a lack of access to finance and 18 percent report inadequate skills as a primary constraint. Taxation reportedly limits small and medium enterprise development, while larger firms perceive the lack of an adequately educated workforce as the main business obstacle.

Small and medium enterprises (SMEs) in trade and services cite tax administration as an obstacle and spend an abundant amount of time interacting with tax officials. Concerns raised by such firms primarily relate to arbitrary tax collection and assessments. Managers in small trade and services firms report that they meet with tax officials at least five times a year, compared to less than three times a year for large firms. At the same time, the ability to negotiate a lower tax burden creates an incentive for many SMEs to remain in the lump-sum tax system, and contributes to a lack of transparency and corruption. Additionally, inconsistencies in existing legislation and a lack of clear guidance on the implementation of recently passed laws and regulations also contributes to high business costs for both domestic and international firms in Lao PDR.

Fifty percent of large firms report that an inadequately educated workforce, especially in the service sector, is a serious problem. In comparison, only one in ten managers of small firms said the same, while managers of large firms reported this as their most challenging problem. In contrast, small firms ranked an inadequately educated workforce below problems related to taxation, access to financial assistance, and electrical energy. The scarcity of qualified personnel is partially due to a disparity between the supply and demand of skills in the market, and to continual growth, especially in the resource sector.

Access to finance is the second most often cited obstacle for business growth, despite the recent credit expansion. Only 19 percent of firms in Lao PDR have a loan or line of credit, the lowest among comparator countries. Research suggests that for investment purposes alternative financing sources such as equity finance, supplier finance or other non-bank financing sources are not available. Less than 3 percent of domestic firms use external sources of financing for investments. On average, 97 percent of firms privately finance their investment costs. Additionally, firms in Lao PDR provide more collateral coverage for loans than in any comparator country. In Lao PDR, the value of collateral is on average three times the value of the loan, compared to 2 times the value in Cambodia and Vietnam.

Significant improvements to reform the business environment in Lao PDR have been made over the past five years. The country now faces a new generation of challenges that need to be addressed. This survey documents a major improvement in access to electricity and other infrastructure constraints. As Lao PDR’s economy continues to transform, the next challenge is to address constraints related to skills, access to finance and the implementation of a growth-friendly tax regime for SMEs. The survey’s results and extensive interviews also confirm that a greater focus on effective implementation of recently passed reforms is crucial to improve the competitiveness of Lao PDR’s economy. Effective implementation of the regulations also should be actively monitored, which in turn requires improvements in data collection at both program or initiative and country levels.
Key recommendations on the three main areas of business growth constraints, as identified in the survey are described as:

**Taxation**
- The taxation regime should balance national objectives for fiscal revenue generation, with broader concerns surrounding the diversity of economic growth.
- Lao PDR should consider introducing a separate tax regime for micro-enterprises based on a flat patent fee.
- For small firms, or taxpayers with a turnover above the new micro threshold and below the mandatory VAT registration threshold, a turnover based simplified tax could be appropriate and would follow good international practice.
- Revise and strictly enforce accounting standards for small and medium sized businesses.
- Consider abolishing the minimum taxations to better support the needs of SMEs.
- A revision of the current tax law and its implementing regulations should be considered, with a particular focus on clearly defining administrative procedures and rights as well as the responsibilities of taxpayers and tax administrators.

**Skills**
- Systems could be improved to provide better information on skills requirements, current and future skill expectations, areas of skills shortage, causes of skill shortages and mechanisms to reward skill acquisition in labor markets.
- Continue strengthening technical vocational education and training initiatives in Lao PDR, as well as continue to forge educational partnerships with the private sector.
- Expand coordination between the private and public sector by introducing contracting schemes with private providers, cost-sharing schemes for specific training courses and initiating voucher systems to help existing workers develop their skills.
- Initiate a regular labor force monitoring system to better understand trends in market structural changes.
- Continue strengthening the basic education system to prepare individuals for the growing demands of Lao PDR’s workforce.

**Access to finance**
- The financial sector should promote policies aiming to improve access to finance, and enhance stability.
- To improve access to finance and to reduce risks in the financial system, transparency and financial literacy among borrowers should be prioritised.
- Promote fair competition in the banking sector to support broad access to financial support services.
- The development of an efficient registration system for movable collateral could help reduce reliance on immovable collateral, or real estate, as the main form of loan security.
- Improvements to the credit information registry could help improve access to finance, as well as assist lenders with improved risk management.
- Improve the availability of longer term funding for investment purposes.
1. BACKGROUND

Due to strong economic growth in recent years, Lao PDR’s economy has rapidly transformed. Following the introduction of market-oriented reforms by the Government of Lao PDR beginning in 1986, the economy has expanded on average by 6.5 percent per year between 1990 and 2009. As a result, the national poverty line fell from 46 percent of the population in 1992 and 1993 to 28 percent in 2007 and 2008. Per capita income more than doubled since 1990, reaching US$1,010 in 2010, thereby moving Lao PDR into the middle-income category according to the World Bank Atlas Classification.

With a small and fragmented domestic market, rapid export growth and high levels of foreign direct investment led the country’s economic performance. Initially, inward investment flowed into the manufacturing and service sectors; however, the natural resource sectors, particularly hydroelectric power and mining have recently dominated market investments (Figure 1 and Figure 2).

Nominal merchandise exports increased 5.6 times from 2000 to 2010. In the 1990s, four main product categories, specifically garments, wood products, coffee, and electricity accounted for approximately 70 percent of total exports, or US$100 million. By 2010, mineral exports, were at valued approximately US$1.2 billion, accounting for more than half of the nation’s total exports.

The contribution of the resource sectors to economic growth has increased significantly in the past five years. Natural resources and the non-tradable sectors are projected to drive future growth (Figure 3 and Figure 4). The natural resource sector’s contribution to GDP growth increased from approximately 2.8 percent in 2009 to 3.7 percent in 2010. Between 2011 and 2015, the sector is expected to grow 3 percent, and up to 3.5 percent between 2016 and 2020. Additionally, Lao PDR’s future economy is expected to benefit from a recovery in the tourism sector, the implementation of large hydropower projects that are now under construction or in the pipeline, and an increase in external demand.

While natural resources are likely to drive growth over the medium term, the non-resource sector is still expected to contribute more than half to real GDP growth and 75 percent to total GDP in the medium term. Non-resource sectors are important for sustainable and broad-based economic growth, providing more direct employment due to high labor intensity. Since investment projects in the resource industry are to a large extent foreign-owned, repatriation of benefits abroad may be significant. Due to this, Lao PDR is experiencing a difference between GDP and GNI growth. As a result, the actual contribution of such projects to national income, and therefore to per capita income, may be less than its contribution to the GDP. If GDP and GNI discrepancies are considerable, GDP growth may not lead to poverty reduction. In Lao PDR, this discrepancy increased from 0 to 5 percent between 1997 and 2008 and is expected to stay above 10 percent until 2025 (World Bank 2011). Therefore in order to sustain long-term economic growth and achieve positive development outcomes, Lao PDR should create conditions for broad-based, private sector led growth.
Over the past two decades, Lao PDR has become increasingly open to trade and integration with the regional economy. Total exports have grown steadily from US$98 million in 1990 to US$1.8 billion in 2008. The export boom acts as a major component of the country’s rapid growth rates over the past decade. The Lao PDR share of merchandise value in GDP increased from 30.5 percent in 1990 to 45.5 percent in 2008, following the increasing trend of lower and middle-income countries over the same period.

Nevertheless, Lao PDR’s economy remains relatively more closed than other neighboring countries in the region to international trade. Unlike most of neighboring countries, Lao PDR has not experienced a steady increase in its trade to GDP ratio by the late-1990s (Figure 5). While Cambodia, Thailand and Vietnam all attained a GDP ratio higher than 100 percent by 2000, and maintained a range between 133 and 171 percent by 2008, the ratio for Lao PDR declined from 84.3 percent in 1998 to 77.1 percent in 2008. Therefore, the dependence of domestic producers in Lao PDR on foreign demand, as well as the dependence of domestic consumers and producers on foreign supply is relatively low. This lower vulnerability to external factors was reflected by the relatively low exposure of Lao PDR’s economy to the Global Financial Crisis.
Despite constraints related to geographical location, high logistics and transport costs and a fragmented domestic market, Lao PDR has the potential to further develop its non-resource sectors. To achieve this objective, Lao PDR may need to leverage its key endowments such as availability of labor surplus in subsistence agriculture; low nominal wage; availability of land for agriculture, forests and pastures; availability of electricity at a moderate cost; traditional handicraft skills; proximity to fast growing regional markets; and unique natural and cultural tourism resources.

Reforms have been made to better enable the business environment, but gaps remain in subsidiary legislation. Lao PDR imposes very few restrictions on investment activities and is progressively reforming the environment for business entry; however, cumbersome and lengthy licensing procedures and inconsistent implementation of legislation has been an obstacle for business development. Under the 2005 Enterprise Law, new businesses can now apply for a unified business registration including business registration, tax registration and company seal from one location. A key landmark was the approval of a new Unified Investment Promotion Law in 2010. The new law replaces previously separate domestic and foreign investment laws and eliminates the need for new investors to obtain an investment license. The new law abolishes lengthy and cumbersome licensing approval procedures for general investment activities, and creates a level playing field for both domestic and foreign investors by harmonizing business entry procedures and investment incentives. With the new law, foreign investors in general business activities can proceed straight to registration under the Enterprise Law. Nevertheless, a lack of full transparency and the inconsistent interpretation and implementation of sector level regulations still poses problems for investors.

Lao PDR is the least populated economy in the East Asian region. With a population of just over 6 million, and a land area half the size of Thailand, the country does not face the same rural-to-urban migration pressures as its neighbors. In addition to this, Lao PDR has one of the highest labor force participation rates in the region at 78.2 percent of the population aged 15 years and above. Yet, the country has the lowest labor force density to land area. In order to move into higher value added manufacturing processes and integrate more closely into regional production networks Lao PDR needs to focus on sectors that are relatively land intensive rather than purely labor intensive.

Recent research on Lao PDR’s product space highlighted high value export focused sectors that have the potential for diversification, including high value processed and fresh vegetables, fruits and other consumable agricultural products (Record and Nghardsaysone 2010). These high value sectors may have greater scope for investment and employment generation in Lao PDR, rather than the more “traditional” low-income sectors such as garments and footwear.

Despite an increase in value terms, the share of foreign investment in non-resource sectors to total investment has continuously declined over the past decade. FDI in non-resource sectors (agriculture, light manufacturing, processing industries, and services) grew at an average of 38.5 percent from 2004 to 2008, prior to the impact of the global financial crisis in 2009. However, the share of non-resource sector foreign investment to total FDI has declined from approximately 59 percent in 2000 to about 17 percent in 2010 due to rapid development of the resource sector. Increasing reliance on natural resources suggests that growth will become increasingly sensitive to any volatility in commodity prices, which could impede the development of other sectors (Brahmbhatt and Vostroknutova 2010).

Private domestic investment is approximately 5.3 percent of GDP, three times less than FDI. This illustrates a relatively low level of domestic private investment in the non-resource sectors. There are concerns that the low levels of domestic investment and investment in non-resource sector will impede the achievement of sustainable high growth or diversification in the long term. Key constraints to domestic private investment in such sectors include the high cost of capital due to poor intermediation, low social returns to economic activity, and lagging regulatory reforms, particularly with the implementation of legislation.

The key challenge is to timely identify the key binding constraints that hinder the growth of firms in the manufacturing and service sectors and take corrective actions to remove those constraints. A basic understanding exists on the constraints that the manufacturing and service sectors in Lao PDR face. However, a number of important questions remain unanswered. These include: 1) Which of the existing constraints are binding constraints impeding non-resource firm growth and competitiveness? 2) What specific corrective actions should be taken? And, 3) How are firms in Lao PDR performing in terms of productivity?
This Assessment intends to fill these knowledge gaps by analyzing data from the second Investment Climate Survey conducted between May and July 2009 (See Annex 1). This Assessment also relates to other relevant sector specific and value chain studies, including analyses of export diversification, and firm surveys carried out by the World Bank, the Government of Lao PDR, and other donor agencies, such as an enterprise survey conducted by the GIZ. Where possible, data on Lao PDR is compared with neighboring countries, other similar landlocked countries and with some LICs. Results from the 2009 enterprise survey are also compared with data from the 2005 World Bank enterprise survey.

The World Bank conducted the second Investment Climate Survey in 2009, in efforts to assess the investment climate in Lao PDR. The survey covered 360 firms, including 143 manufacturing firms and 217 firms in trade and services. These firms were surveyed across four provinces: Vientiane, Luang Prabang, Champasack, and Savannakhet (Figure 7 and Figure 8). As with the first Investment Climate Assessment, conducted by the World Bank in 2006, the findings of this Second Investment Climate Assessment will be applied to policy dialogue to advise on strategic priorities and future analytical work as part of the World Bank’s engagement with the Government of Lao PDR.

The survey allows for an in-depth analysis of various aspects of business environments. It also supports an assessment of the changes that took place since the previous survey was conducted in 2005. Unfortunately, a number of differences in the survey methodology limit the two surveys’ comparability. One difference is that the 2009 survey focused on more comprehensive sector coverage including manufacturing, retail trade and other services. In contrast, the 2005 survey covered only manufacturing and tourism. Geographical coverage also differs between the two surveys. The 2005 survey covered six provinces: Vientiane, Oudomxay, Luang Prabang, Xayaboury, Savannakhet, and Champasack. In contrast, the 2009 survey covered only four: Vientiane, Luang Prabang, Champasack, and Savannakhet. Due to the differences in geographical focus, comparisons between the two surveys are restricted to manufacturing in the four provinces covered in both surveys.
2. OVERVIEW AND PERFORMANCE OF FIRMS IN MANUFACTURING AND SERVICES

Since the introduction of the New Economic Mechanism in 1986, the number of firms in manufacturing and services has grown rapidly. These firms remain small as the majority employ less than 5 employees. According to the latest economic census (2006), there are approximately 127,000 enterprises operating in Lao PDR, out of which 93 percent have less than 5 employees. While 4 percent employ between 5 and 9 persons, 2 percent employ between 10 and 99 persons, and another 2 percent employ more than 99 workers.

While the manufacturing sector has performed well since the late-1980s, it encounters significant challenges and risks in core sub-sectors (see Box 1, 2 and 3). The manufacturing of food and beverages, textiles and furniture, construction materials and wood products are major sub-sectors in terms of output and employment. Overall, the sector enjoyed a 10 percent growth during the 1990s. Since 2000, this rate has started to slow down.

The manufacturing sector’s contribution to GDP increased moderately in the past years from 7.6 percent from 1995 to 1999 to approximately 9.9 percent from 2003 to 2008. From 2011 to 2015, it is expected to slightly increase to 10.6 percent. Sub-sectors such as food, beverage and construction materials comprises of the majority of the growth (Figure 9 and Figure 10).

A low population rate, among other factors, requires the medium and large-scale enterprises to rely on a strategy based on low cost, labor-intensive manufactured exports to regional and international markets. The economically active population in Lao PDR is estimated at 3 million, or half of the total population. A low urbanization ratio of 27 percent puts the total non-agricultural labor force in 2010 at 666,400. Out of 666,400 persons, firms in the manufacturing and service sectors employ approximately 260,000. The limited employment base clarifies reasons behind an increased labor shortage in labor intensive and fast growing sectors such as garments, construction, tourism, agri-business, mining, hydro, banking and development sectors.

Labor productivity in Lao PDR is lower than in neighboring countries and below the levels suggested by its income per capita. Labor productivity in Lao PDR is slightly lower than Cambodia and Vietnam and significantly lags behind the leading countries in the region such as China, Malaysia and Thailand (Figure 11). Further analysis suggests that labor productivity in Lao PDR is lower than would be expected given income levels (Figure 12).
Like in most countries, exporting firms demonstrate lower levels of productivity than non-exporters (Table 1). In comparator countries, exporters productivity rates are higher than non-exporters, while large domestic firms are more productive than non-exporters, and foreign-owned firms are more productive than domestic firms. This is not the case in Lao PDR, where the average foreign-owned firm is slightly more productive than then average domestic firm, non-exporters are more productive than exporters and small firms are more productive than large firms.

There are several plausible explanations for the relatively low performance of exporters, which focuses on labor skill levels. Garments, wood and furniture firms export the majority of their goods, while other manufacturing firms only export approximately 3 percent of their products. The low productivity of exporters may reflect that they are in low-skill, labor-intensive sectors.

### Table 1: Firm performance in Lao PDR, by firm type

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Workers</th>
<th>Value added per worker (2005 US$)</th>
<th>Unit Labor Costs</th>
<th>Labor Costs per Worker</th>
<th>Capital per worker (book value)</th>
<th>Capital Productivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>11</td>
<td>$1,554</td>
<td>36%</td>
<td>$439</td>
<td>$1,110</td>
<td>134%</td>
</tr>
<tr>
<td><strong>Internationalization</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exporters</td>
<td>30</td>
<td>$415</td>
<td>60%</td>
<td>$197</td>
<td>$1,233</td>
<td>72%</td>
</tr>
<tr>
<td>Non-exporters</td>
<td>10</td>
<td>$3,808</td>
<td>32%</td>
<td>$533</td>
<td>$888</td>
<td>194%</td>
</tr>
<tr>
<td><strong>Ownership</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foreign-Owned</td>
<td>89</td>
<td>$1,775</td>
<td>38%</td>
<td>$710</td>
<td>$1,686</td>
<td>131%</td>
</tr>
<tr>
<td>Domestic</td>
<td>10</td>
<td>$1,516</td>
<td>36%</td>
<td>$432</td>
<td>$1,057</td>
<td>136%</td>
</tr>
<tr>
<td><strong>Size</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small (5-19)</td>
<td>7.5</td>
<td>$2,190</td>
<td>36%</td>
<td>$355</td>
<td>$740</td>
<td>214%</td>
</tr>
<tr>
<td>Medium (20-99)</td>
<td>30</td>
<td>$1,606</td>
<td>33%</td>
<td>$666</td>
<td>$2,466</td>
<td>17%</td>
</tr>
<tr>
<td>Large (100 and up)</td>
<td>220</td>
<td>$1,246</td>
<td>39%</td>
<td>$631</td>
<td>$711</td>
<td>131%</td>
</tr>
<tr>
<td><strong>Sector</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Garments</td>
<td>30</td>
<td>$1,009</td>
<td>68%</td>
<td>$601</td>
<td>$841</td>
<td>103%</td>
</tr>
<tr>
<td>Furniture and wood</td>
<td>8</td>
<td>$451</td>
<td>60%</td>
<td>$333</td>
<td>$2,561</td>
<td>93%</td>
</tr>
<tr>
<td>Other</td>
<td>11</td>
<td>$3,916</td>
<td>32%</td>
<td>$444</td>
<td>$888</td>
<td>194%</td>
</tr>
</tbody>
</table>

Source: World Bank Enterprise Survey
In addition, to sector differences between exporters and non-exporters, it is also possible that low levels of competition in domestic markets affect measured productivity. Ideally, measures of labor productivity use physical measures of output. This study measures sales in monetary rather than physical terms since the latter is not available. Monetary measures of output are affected by prices. For example, when domestic markets are not highly competitive, monetary measures of output appear artificially high for domestic firms. In contrast, firms competing on international markets will face greater competition and lower prices.

Lao PDR has average productivity rates, with no significant changes in productivity levels between 2005 and 2009 (Figure 13). Total factor productivity (TFP) for the average firm in Lao PDR is higher than in comparator countries such as Tajikistan, but is lower than Armenia or Moldova. In Lao PDR, the TFP in 2009 was approximately 98 percent of TFP in 2005.

On average, foreign-owned firms, firms with international certification and firms using technologies, such as the Internet, are yield statistically higher productive rates (Figure 14). In the Lao PDR, foreign-owned firms are approximately 50 percent more productive on average than domestic firms. While firms that utilize the Internet are about 50 percent more productive than those that do not have access, firms with ISO certification are approximately 20 percent more productive than similar firms without.

Compared to other countries, domestic and foreign-owned firms in Lao PDR are slightly less productive, while ISO certified firms are more productive. There is no evidence that exporters are more productive than non-exporters or that firms with bank credit are more productive than firms without. The differences between exporters and non-exporters and firms with and without bank credit in terms of TFP are relatively small and are not statistically significant. The survey’s results also suggest that bank credit is not being channeled towards the most productive firms.
The share of exporting firms in Lao PDR is lower than in other Southeast Asian countries, but higher than in Central Asia (Figure 15). Previous studies suggest that international trade tends to be relatively important in small economies. Because of their limited ability to meet domestic demands, small economies tend to import more than larger countries. In small economies exports are also important, unless the country has other ways of earning foreign exchange through remittances, tourism or foreign aid.

Approximately 20 percent of manufacturing firms in Lao PDR export a portion of their output. This is roughly comparable to most of the comparator countries from Central Asia but significantly lower than other countries in Southeast Asia including Cambodia (44 percent), Malaysia (62 percent), Thailand (62 percent) and Vietnam (49 percent). Of the 20 percent of firms that export, close to 90 percent of the firms export all of their output. As a result, the average firm, which includes importers and exporters, exports 20 percent of its output. This is a higher rate than in any of the comparator countries outside of Southeast Asia.

**Table 2: Characteristics of exporters and non-exporters**

<table>
<thead>
<tr>
<th></th>
<th>Exports (% of sales)</th>
<th>% of firms exporting</th>
<th>Imports (% of inputs)</th>
<th>% of firms importing</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>20</td>
<td>21%</td>
<td>21</td>
<td>23%</td>
</tr>
<tr>
<td><strong>Internationalization</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exporters</td>
<td>94</td>
<td>100%</td>
<td>30</td>
<td>34%</td>
</tr>
<tr>
<td>Non-exporters</td>
<td>0</td>
<td>0%</td>
<td>18</td>
<td>19%</td>
</tr>
<tr>
<td><strong>Ownership</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foreign-Owned</td>
<td>63</td>
<td>63%</td>
<td>72</td>
<td>82%</td>
</tr>
<tr>
<td>Domestic</td>
<td>17</td>
<td>18%</td>
<td>17</td>
<td>18%</td>
</tr>
<tr>
<td><strong>Size</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small (5-19)</td>
<td>8</td>
<td>8%</td>
<td>14</td>
<td>14%</td>
</tr>
<tr>
<td>Medium (20-99)</td>
<td>38</td>
<td>42%</td>
<td>23</td>
<td>29%</td>
</tr>
<tr>
<td>Large (100 and up)</td>
<td>70</td>
<td>75%</td>
<td>81</td>
<td>83%</td>
</tr>
<tr>
<td><strong>Sector</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Garments</td>
<td>61</td>
<td>62%</td>
<td>39</td>
<td>41%</td>
</tr>
<tr>
<td>Furniture and wood</td>
<td>45</td>
<td>50%</td>
<td>12</td>
<td>15%</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>3%</td>
<td>19</td>
<td>21%</td>
</tr>
</tbody>
</table>

Source: World Bank Enterprise Survey

Exporters tend to be larger and more likely to be foreign-owned than non-exporters. The median exporter has 30 workers compared to only 10 workers for the median non-exporter. They are also disproportionately foreign-owned as 63 percent of foreign-owned firms export compared to only 17 percent of non-exporters.
In sharp contrast to most countries, exporters are less productive than non-exporters. The median exporter produces US$415 of output per worker compared to US$3,808 of output per worker for the average median non-exporter. This observation is consistent with the one that many of the exporters are in low technology sectors such as garments and wood and furniture. It may also suggest that competition is relatively low in the domestic economy. Because the measure of output measures output in currency terms rather than in physical output units, the observed productivity level might reflect that prices in domestic markets are relatively high rather than firm more productivity.

Firms in the Lao PDR struggle to remain in international markets, once new export products are introduced or entering a new export destination (Stirbat, Record and Nghardsaysone 2010). Export trends tend to be small and short-lived. This suggests that while there is significant experimentation and discovery by firms, there is limited market success rate. Analyses of the factors that influence survival past the first year reveal that this is positively correlated with the initial dollar value (starting big makes a difference) and is helped by the firm’s experience with the product and the destination, but hindered by a lack of focus.

In Lao PDR, approximately 23 percent of firms report that they rely on imported inputs for their production, which is lower than in most comparator countries (Figure 16). In most comparator countries, more than half of firms report that they use imported intermediate inputs in their production process. Exporters are more likely to report that they use imported inputs. About one-third of exporters reported that they imported some of their inputs. Foreign-owned enterprises are even more likely to report that they import some of their inputs. For example, over four-out-of-five foreign-owned enterprises report that they import some of their inputs. Firms in the garment sector also tend to be more likely to import inputs, while firms in the wood and furniture sector are less likely to import inputs than other firms.

Return on assets for firms in Lao PDR is higher than in many comparator countries (Figure 17). The median firm in Lao PDR reports that its pre-tax return on sales is about 36 percent and its pre-tax return on assets is about 60 percent. This is higher than in most of the comparator countries for both measures. As with labor productivity, exporters report lower return on sales and return on assets than non-exporters (15 and 11 percent for exporters respectively compared to 43 and 116 percent for non-exporters).

As previously discussed, exporters should be more productive than non-exporters. As most exporters are not selling on domestic markets, it suggests that the higher productivity and performance on non-exporters might be due to lower levels of competition in domestic markets. If non-exporters were as efficient and profitable as the data suggests, the firms should be able to enter export markets.
Competitiveness of key manufacturing sub-sectors such as wood, garment and construction materials are limited. In 2005, the garments sector phased out export quotas under the Agreement on Textiles and Clothing (the ten-year extension to the Multi-fiber Agreement (MFA)). This represented a significant risk for the Lao PDR garment sector as the main commercial justification for many garment factories currently located in Lao PDR was to take advantage of lack of quota constraints. Moreover the competitiveness of the garment industry, which is characterized by the large number of companies producing on CMT and subcontracting basis in Lao PDR relative to those in Bangladesh, China and Vietnam, remains questionable. Since the early 2000s, the garments sector has received no new investment (see Box 1).

The wood products sector is characterized by low value-addition and relatively inefficient small and medium sized primary factories, with non-transparent allocations of logging quotas, and low capacity utilization (see Box 2). Lao PDR’s construction materials industry consists mainly of cement and steel bars production. The cement industry is currently producing 830 thousand metric tons of cement and contributing about US$ 70 million a year to GDP. The steel industry is producing 24 thousand tons a year and contributing about US$ 27 million a year to GDP (UNDP 2010). Currently, both steel bar and cement enjoys protection in the form of tariff and non-tariff measures, primarily quantitative restrictions on import and price control. Once some of these measures are phased out as part of commitments under AFTA or WTO accession, they will face more competitive pressures from imported products, especially those from the region.

The services sector grew at a relatively fast pace averaging 7.4 percent during 2000 to 2008, but is expected to slow slightly to about 6.8 percent growth per annum over the next decade (Figure 18). The contribution from these sectors to annual GDP growth have been dramatic, with on average about 3.6 percentage points during 2003 to 2008 and continues to be quite significant over the medium term despite some expected declines in the long term. Wholesale and retail trade, financial intermediation, and transportation, storage and communications have been the main contributors to the services sector’s growth, while other sub-sectors stayed at similar levels throughout the last two decades.
Lao PDR is emerging as one of the “top ecotourism destinations in Asia” because of its unique nature and culture. The number of tourist arrivals to Lao PDR increased constantly from 1992 to 2009 with an average growth rate of above 20 percent. In 1992 Lao PDR received only 87 thousand tourist arrivals, by 2009, the number of tourist arrivals had increased to 2 million. As a result, the revenue from tourism also increased from just over US$2 million in 1991 to about US$268 million in 2009. However, out of the 2 million arrivals in 2009, only 220,000 were long haul international arrivals (EU, Americas, Africa and Middle East). Compared to the number of international arrivals in Southeast Asia, Lao PDR still has huge potential to increase this market segment. Lao PDR will need to make key a strategic choice between the regional or international market. Preferences clearly differ and there is a sharp contrast in terms of how the country is presented and marketed depending on the target audience. In collaboration with the private sector, LNTA has attempted to develop various a brands for Lao PDR but destination marketing has been extremely limited.

Growth in the construction sector is fueled by high FDI in natural resources, high public investment including ODA in infrastructure, and a real estate boom in major urban centers in the country. The trend is expected to continue at least in the medium term. It is estimated that there are currently about 300 registered construction companies in the country and about 1,000 small contractors involved in civil works, employing more than 120 thousand workers (the largest sector in terms of employment as estimated by the Lao Construction Association). Anecdotal evidence suggests that the Lao PDR construction sector relies heavily on imported skilled labor from China and Vietnam. For large infrastructure or commercial projects, participation of skilled Thai workers is also significant. According to the Lao Construction Association, the average proportion of foreign workers in the construction sector ranges from 30 percent to 80 percent depending on the size and sophistication of construction projects.

The long-term sustainability of the non-resource sector in Lao PDR requires improvements in productivity and strengthening of the competitive environment in the domestic market. Recent reforms have spurred the development of a domestic private sector. To build on these gains and remain competitive within the region, reforms needs to continue and deepen efforts to improve the business environment, eliminate constraints to growth, and enhance the productivity of firms in Lao PDR.
Box 1: Garments Industry – surviving against expectations, but experiencing growth constraints

Over the last decade, the garment industry has played a significant role in the economy of Lao PDR, generating foreign exchange earnings and employment opportunities. The garment industry first emerged in the early 1990s and since then exports have been steadily increasing.

Currently, there are approximately 59 exporting companies and about 57 sub-contractors employing up to 24,000 workers. Between 1998 and 2002, garment exports represented 30-40 percent of the country’s total merchandise exports, before progressively dropping to around 10 percent in 2010 as modest export growth in the garments sector has been outstripped by booming minerals exports. Business leaders anticipated a drop in demand following the expiration of the Agreement on Textiles and Clothing but garment producers in Lao PDR are still reporting a growth in demand.

The main export market for the Lao PDR garment industry is the EU, followed by some Asian countries, Canada, and the US. In 2008, the EU market accounted for 89 percent of total garment exports from Lao PDR, with a total value of US$148.7 million (Association of Lao Garments Industries 2009). The EU is a favorable market because of duty-free market access available under the “Everything but Arms” initiative. While the penetration of Lao PDR garment exports into the EU market is small, accounting for just a 0.1 percent market share in 2006, it has retained its market share over the last five years despite strong growth of exports from China. The annual growth rate of Lao PDR garment exports to the EU has progressively increased with an annual growth rate of about 9.4 percent. The US accounts for only a small share of total garment exports, with just 1.4 percent of total exports in 2005 despite the implementation of the Normal Trade Relations (NTR) in 2005. Under NTR, Lao PDR garment exports to the US are subject to an average tariff of 12.5 percent, which is high compared to the countries receiving preferential access to the US market. In addition, factors such as the cost and time of transportation restrict the capacity of Lao PDR to penetrate the US market.

Unlike Cambodia and other countries in South Asia, the impact of the 2008-2009 financial crisis on the Lao garment industry has been limited. According to figures from the Association of Lao Garments Industries, no single industry worker was laid off during this period. With recovery, several exporters are now facing a shortage of basic skilled labor.

The minimal impact of the global financial crisis on Lao PDR garment exports is perhaps due to the following factors:

• Demand for imported clothing in Europe was less affected by the financial crisis as EU clothing imports did not yet fall significantly during this time. In contrast, US imports dropped substantially. Meanwhile shipments from China to the US surged while other suppliers were confronted with a dramatic decline in US orders because of the elimination of US limits on imports from China.

• The strong market position of Lao PDR garment products in Europe. Over the past few years, Lao PDR has successfully retained its market share of 0.1 percent, despite strong growth of exports from China.

• Lao PDR garment producers have also indirectly benefited from the strong performance of Thai clothing exports to Europe because of its close integration with the Thai textile industry (a significant number of Lao PDR producers are operating as subcontractors for Thai exporters). While US imports of clothing products from Thailand drastically declined in 2009, Thai exports of garments to Europe rose by 11 percent.
Box 2: Wood Processing Industry – questionable business model and a distorted business environment

The wood processing industry is one of the major manufacturing sectors in Lao PDR, yet it is still at the early stage of development as it consists primarily of inefficient small and medium size sawmills, plywood mills and other wood processing plants representing the low value added primary industry sector. In addition, there are some secondary wood processing industries and one small paper mill using recycled fiber. The existing primary wood industries consist of more than one hundred sawmills and 2 plywood mills with a total operating capacity (log input) of about 1.2 million m³ per annum. More than one thousand furniture manufacturers represent the secondary industry and most of them are family-owned, micro-companies purely serving domestic markets. The sector accounts for about 1.5 percent of total exports and employs about 22,000 workers.

Lao PDR timber is mainly exported in the form of semi-processed, sawn logs or various kinds of primary wood processing products, while additional minor quantities are further processed into strip parquet flooring, furniture and various other secondary wood processing products. Officially recorded exports of wood products are about US$ 200 million annually, of which less than US$ 5 million are secondary wood processing products. This figure has not changed since 2000. Sawmill products are increasingly sold on the domestic market, and are often low quality-sawn wood, not kiln-dried, and therefore less suitable for the production of many secondary wood processing industry products.

Government policy has actively promoted the modernization and integration of wood processing plants to increase the output of further value-added products. For example since 1999, the export of logs has been banned and, since August 2002, the export of sawn wood has also been banned (although there are frequent allowances for export of logs on an “exceptional basis”). This policy has been successful to the extent that the exports of processed wood have been steadily growing and unprocessed wood products have been decreasing. However, most processed wood is exported for further processing in Thailand and Vietnam where the bulk of value addition takes place ahead of onward export to final markets. However, it is unclear if much of the basic processing of wood exports that takes place within Lao PDR actually demonstrates value addition over round unprocessed logs. First grade logs of large diameter would almost certainly earn higher revenues for the country if exported as logs instead of “value addition” which entails being sawn down into un-graded and crude boards, then exported non-dried to neighboring countries not paying international market values.

A fundamental problem is that the existing wood processing industry does not have incentive to enter into secondary wood processing. Most wood processing enterprises have very strong business linkages with the wood processing industry in neighboring countries, which have strong interest to use Lao PDR as a source of raw material for their businesses. In most cases, companies from neighboring countries provide necessary working capital to Lao PDR firms to secure log quotas. If existing measures to ban the export of logs are fully enforced, this may put more pressure on the secondary processing industry to consider relocating some of their production facilities to Lao PDR. However, the Government does not allow foreign direct investment in the secondary wood processing industry. Thus, strict implementation of these two regulations would prohibit foreign investment that could potentially bring in new technologies, new products and new export markets. In addition, a lack of skilled labor in the domestic market constrains development in the sector and acts as a hindrance on productivity growth. Finally, the current discretionary and rather unclear log quota allocation system, has also tended to discourage higher quality investment in the secondary wood processing industry.
Box 3: Emerging Agribusiness – significant potential in the future, if the production model is right

Along with the hydropower and mining sector, agriculture is emerging as an important sector attracting increased foreign direct investment. Agriculture, in contrast with services and industry, has been growing at a rather slower pace of 3 percent annually. However, signs indicate that the sector is set for strong growth in the next decade. As the productivity rates of agricultural land approach their limits in China, Thailand, and Vietnam, the availability of underutilized land in Lao PDR will continue to be a major incentive for both foreign and domestic investors.

Almost 70 percent of Lao PDR’s labor force depends on agriculture and any successful growth in agriculture will have a direct impact on poverty reduction. Many of these small-scale producers however are cut off from access to inputs and have highly restricted access to higher value markets. The scattered location of farms, the poor access to roads for farmers, and their inadequate knowledge of newer high value opportunities are significant limits to expansion.

Commercial agriculture comprises two main models: plantation/estate agriculture and contract farming. Both are currently in use in Lao PDR. Plantation/estate agriculture has a long history in Asia, particularly in the early 20th Century, when large land concessions were made to foreign investors in countries such as Indonesia, Malaysia, and Vietnam. The economics behind plantation agriculture corresponds to the timing and coordination of farm production with processing or marketing; the viability of infrastructure investments to reduce costs; and the employment of frontier or unutilized land with low opportunity costs. Examples of large-scale plantations in Asia include black tea in India, palm oil in Indonesia, and rubber in Malaysia. Similar concessions are currently being made in Lao PDR in the rubber, sugar, pulp, and cassava sectors. Since a majority of further processing is done outside of the country, land rents may be lower, thereby limiting in-country returns.

As economies continue to develop and as frontier land becomes scarcer and infrastructure more widely available, the attractiveness of plantation agriculture may fade. For example, Thailand, which is essentially a nation based on its 6 million small farmers, has risen to become the 3rd largest producer of sugar after Australia and Brazil; and, with its 70,000 smallholders in the palm oil sector, it also favorably competes with large plantations in Indonesia and Malaysia. As a result, the attractiveness of plantation agriculture may vary over time and development.

Another option for commercial agriculture is contract farming. Under this system a lead firm engages with many small farms through some form of formal or informal “contract” to purchase a farmer’s output at an agreed upon price in the future. Embedded in this contract are arrangements to ensure that farmers get their inputs on time, have up-to-date production advice, and that logistics costs (transportation and wastage) are reduced to a minimum. In return, the lead firms receive more predictable supplies, reliable quality standards and acceptable prices.

Lao Agro-Industry in Baan Keun is a good example of how this functions in the cultivation and processing of canned sweet corn. The firm directly employs some 400 workers in the processing facility and buys produce from another 1,300 contract smallholders working on 700 hectares of their own land. Ninety-five percent of these farmers have loans from the Agricultural Promotion Bank. Over the course of the last 4 years this company has been able to help farmers double their yields to 2.2 tons per hectare, enabling farmers to get a net profit of 700,000 Kip (US$ 820) per annum for 1 rai of land (approximately 6 rai = 1 hectare). This enterprise is in the process of expanding production and claims to have no demand constraints. The company’s core problem is the recruitment of another 1,000 farmers into the supply chain. Similar models are being widely used in other Southeast Asian economies, particularly in Cambodia, Indonesia, Thailand, and Vietnam. While the prices of many agricultural inputs like fuel, tractors, and fertilizer cause this firm to have an ex-factory price that is 15 percent higher than Thai competitors and 20 percent higher than Vietnamese competitors, this company still enjoys a GSP privilege that gives them a 10-15 percent price advantage over rivals.

For agriculture to play a more prominent role in Lao PDR’s economy, particularly in the area of poverty reduction, more research is needed to determine what model or combination of models of commercial agriculture is best suited to local realities such as the long term economic impact, the welfare implications, and environmental effects.
3. KEY INVESTMENT CLIMATE CONSTRAINTS FOR THE NON-RESOURCE SECTOR

Taxation, access to finance and an inadequately educated workforce are identified as the key growth constraints by most firms in Lao PDR (Figure 19). A significantly greater number of firms view these areas as problematic compared to other countries in East Asia. Thirty percent of firms—three times the number compared to other countries in East Asia—view tax rates as a major constraint. Twenty percent of firms report a lack of access to finance as a major obstacle, while an inadequately skilled workforce ranks as their second major concern. These obstacles are slightly higher than the regional average.

Figure 19: Tax rates, access to finance and lack of skilled labor as the top obstacles to growth (% of firms)

Source: World Bank Enterprise Survey

Fewer than 5 percent of firms identify corruption, the quality of courts, tax administration, business licenses and permits, and customs and trade regulations as major issues. In all cases, with the exception of customs and trade regulations, firms in Lao PDR are less likely to view these areas as problematic compared to other countries in East Asia. While these constraints are not reported as the main obstacles by a large number of firms, they may present major constraints to growth for certain groups of firms as discussed below.

Service firms are more likely to view tax rates as the main constraint, while an inadequately skilled workforce and lack of access to finance systems are the main problems identified by manufacturing firms (Figure 20). Nearly 40 percent of service firms identify tax rates as the main growth obstacle, compared to 20 percent of manufacturing firms. At the same time, firms in manufacturing describe inadequate skills as a major problem. This problem is identified by 25 percent of firms in manufacturing, compared to only 12 percent of firms in the service sector. Lack of access to finance investments is the second most important obstacle for both service and manufacturing firms.

A number of other survey question results significantly varied. Over 5 percent of manufacturing firms identify business licensing and registration as a major obstacle, compared to less than 1 percent of firms in the service industry. Meanwhile, 10 percent of firms in the service sector acknowledge that business informalities are a major problem, while only 5 percent of firms in the manufacturing sector reported this as a drawback.
Small firms are more likely to see tax rates as their main growth obstacle. Medium and large firms identify inadequate skills as a key constraint, while all report financial support as an issue (Figure 21). Over 40 percent of medium and large firms identify inadequate skills as the main constraint, compared to only 8 percent of firms in the service sector. Meanwhile, 45 percent of small firms report tax rates as a primary constraint. This can be compared to 13 percent of large firms and 9 percent of medium-sized firms that recognize tax rates as a hindrance to their business.

In the service and manufacturing sector, finance is the second most frequently named obstacle impeding growth. As reported by 11 percent of small firms, access to electricity emerges as the third most frequently identified obstacle that hampers growth. This can be compared to less than 2 percent of medium firms that identify this as a problem. For large firms in the Lao PDR, finance is not recognized as a problem; however, business licensing and permits are reported to be the main obstacle by over 8 percent of large firms compared to less than 1 percent of those classified as SMEs.

The main obstacles to business expansion vary depending on location (Figure 22). For example, in Vientiane firms identify tax rates (31 percent) and access to finance (27 percent) equally as their main obstacles. This is followed by inadequate skills of the local workforce (13 percent).

In Savannakhet and Champasack, Lao PDR’s second and third largest provinces, more than half of all firms identify tax rates as their main growth impediments, while a lack of electricity followed closely behind. Access to finance was also reported as a problem by 18 percent of firms in Champasack. In the northern province of Luang Prabang, an inadequately trained workforce emerged as the main obstacle, as reported by 55 percent of firms. In contrast to the southern provinces, tax rates are the second most often cited problem, reported by 26 percent of respondents in Luang Prabang.
Figure 23: Although many of the concerns were the same, firm managers were far less likely to say that infrastructure was a problem in 2009 than in 2005.

In comparison to 2005, infrastructure is currently less of a concern in the manufacturing sector (Figure 23). With this said, 15 percent of firms in the sector still identify electricity as the main obstacle in 2009 nearly 50 percent less than in 2005. The share of firms concerned with an inadequately trained workforce increased the most from 7 percent in 2005 to 23 percent in 2009.
4. TAXATION

Official tax rates in Lao PDR are comparable to regional neighbors (Figure 24). According to the Doing Business in 2011 Report, tax rates in Lao PDR are comparable to Vietnam, yet higher than in Cambodia. Additionally, the number of tax payments required is lower than in most comparator countries. Despite this, 43 percent of managers identified tax rates as a major growth constraint, which is proportionately higher than in many comparator countries.

Even though tax rates do not appear to be high, complexities related to multiple tax regimes and inefficiencies within the tax collection process create a significant burden for entrepreneurs (Figure 25). Studies suggest that firms in Lao PDR spend more time than in most comparator countries to prepare, file and pay taxes. For example, managers in Lao PDR receive more visits from tax officials than in all comparator countries. An average firm in Lao PDR has more than four meetings with tax officials in a year, compared to 2 in Kyrgyzstan – the country ranking second highest in tax administration obstacles among comparators.
SMEs in the trade and services sector more often cite tax administration as an obstacle and spend more time interacting with tax officials than large firms (Figure 26 and Figure 27). Small trade and services firm managers report that tax administration is a problem, as they are required to meet with tax officials at least 5 times a year. In comparison, large firms meet with tax officials less than 3 times a year. Among different industries, firms in retail and wholesale trade, followed by garment firms, face the most significant problems, reporting an average of more than 6 visits by tax officials a year.

**Figure 26:** The administrative burden associated with taxes is the heaviest on small firms in trade and services

**Figure 27:** Small and medium firms in trade and garment industries say they have more than 5 visits by tax officials in a year

Arbitrary tax assessment and lump sum collection is one of the likely drivers of SMEs’ discontent with the current tax administration system. Small businesses with an annual turnover of less than 200 million Kip (US$ 24,000) can opt to apply for a ‘simplified’, versus regular accounting standard and pay a presumptive tax based on turnover. However, many small businesses in Lao PDR do not follow an accounting regime and often do not maintain financial records for tax purposes. In this case, tax liability is determined through negotiations between the entrepreneur and tax officials, and is assessed on the basis of an estimated business profit.

The vast majority of SMEs in Lao PDR – 40,000 out of a total of 47,000 registered enterprises - fall into this category. While the estimation for lump sum tax liability should follow criteria such as business location or type of business activity, the General Tax Law and its guidelines for implementation do not provide sufficiently clear guidelines on how to establish a base for calculating lump sum tax. In practice, this assessment method’s implementation is not standardized and does not support a transparent system.

**The need to standardize the lump sum tax system is evident across various levels of administration.** Business taxation in Lao PDR may vary considerably according to location and if the District or Provincial office administers the tax. Large firms and foreign enterprises typically register with, and pay tax to, the Central office. Some businesses registered for tax purposes at the District level stated that their ‘contractual’ obligations arbitrarily increase to meet tax targets without any reference to evidence of increased revenue or a change in tax policy.

Businesses registered for tax purposes with Provincial offices often, but not universally, pay by cheque. At the District level, more than two thirds of receipts are received in cash. Small businesses interviewed indicated that receipts were usually, though not universally, issued for tax payments and there is a perception that the cash payment system is subject to irregularity.
The ability to negotiate a lower tax burden creates an incentive for many SMEs to remain in the lump-sum tax system, and contributes to a lack of transparency and corruption. Discussions with a district tax office revealed that up to 80 percent of businesses within their jurisdiction paying through a lump sum approach could be eligible to pay tax on an accounting basis. Although many entrepreneurs complain that their ‘contractual tax obligation’ is arbitrarily increased to meet tax collection targets without any reference to evidence of increased revenue, they are reluctant to move towards a more formal tax regime. This reveals the taxpayer’s preference for the ‘negotiated alternative’, despite complaints that negotiations create inequalities between firms due to factors such as negotiation skills and personal relationships.

The unwillingness of many small firm taxpayers to operate bank accounts and unavailability of banking services in rural locations further complicates this situation. Sectors that identify tax rates as a problem also more likely to identify informality as an obstacle (Figure 28 and Figure 29).

The practice of demanding loss-making businesses to pay a minimum tax is another important disincentive for businesses to move to standard accounting regimes. Taxpayers filing returns based on ‘normal’ or ‘extended’ accounting are required to pay a minimum profit tax based on turnover (0.25 percent for manufacturers and 1 percent for services). In the event that the business reports a loss, or has paid tax installments on profits that are less than the minimum profit tax, they are required to pay the difference.

According to Fiscal Policy Department officials, the minimum tax was originally introduced in recognition of a limited tax administration capacity as a rough approximation method for reducing tax evasion. While the General Tax Law provides an exemption from the obligation to pay the minimum tax for businesses, which demonstrate accounting losses through audited accounts, many businesses claim officials demand minimum taxes, despite compliance with the auditing requirement. This practice raises the effective average tax rate for businesses that experience significant fluctuations in profit.

For tax systems to achieve the desirable property of symmetry, the ability to carry losses forward is required. The failure to allow tax exemptions devalues the Law’s provision, which allows businesses to carry forward three years of losses. This is a standard provision practiced throughout the region, failing to implement it in effect raises tax rates and undermines competitiveness. The failure to implement the law may also work against the intention to expand the proportion of businesses that report under the normal accounting system. On the contrary, it may support businesses to remain under the arbitrary ‘lump sum’ tax system applied to smaller businesses.

The revised General Tax Law approved by the National Assembly in June 2011 abolishes the minimum taxation, which contributes to an improved investment climate and facilitates the movement of businesses from the lump sum into the standard tax regime.

Inconsistencies in laws governing investor tax status in Lao PDR result in uncertainty and inequality. With the introduction of the VAT law in 2006, but no complementary changes to either the General Tax Law or existing laws on foreign and domestic investment, fundamental inconsistencies were introduced causing interpretative and implementation difficulties for tax and customs authorities and significant uncertainty for businesses. The recently approved General Tax Law adopts international practice on the presumptive tax regime. Based on Micro, Small and Medium business segmentation, the Law implements turnover as a replacement of turnover tax.
5. LABOR

An inadequately educated workforce emerged as the leading constraint for large firms, especially in the services sector (Figure 30 and Figure 31). Fifty percent of large firm managers indicated that inadequately educated workers hindered potential productivity and growth. In comparison, only one in ten managers of small firms said the same. This challenge ranked below tax rates, access to finance, and electricity for small firms.

Large manufacturing firms were somewhat less likely to criticize the adequacy of their workforce compared to non-manufacturing firms. Findings from in-depth interviews with leading firms regarding the shortage of unskilled labor revealed that approximately 70 percent of large manufacturing firms are represented by labor intensive sub-sectors such as wood processing and garment companies. Additionally, most wood processing plants produce simple primary wood products, which do not require skilled labor. Most garment companies operate as CMT producers, which predominantly employ basic skilled workers that are trained on-site by foreign production supervisors (see Box 1 and Box 2).

Large firms in Lao PDR report inadequate skills as a major problem more than in comparator countries (Figure 32). While 46 percent of large firm managers in Lao PDR identify inadequate skills as a key problem, only 18 percent of managers of large firms in Cambodia and Mongolia and 12 percent in Vietnam reported this as a setback. In manufacturing, exporters were more concerned about inadequately educated workers than non-exporters (Figure 33).
The scarcity of qualified personnel could be partly due to a mismatch between the demand and supply of skills in the market, and partly due to a fast growing demand for skills, especially in the natural resource sector. An increased demand for labor in the resource sector implies a shift of workers from the non-resource sector, exacerbating human resource shortages. An increased demand for labor in the resource sector implies a shift of workers from the non-resource sector, exacerbating human resource shortages. The competition for both skilled and unskilled labor is expected to continue to increase.

The mismatch between the requirements of employers and existing skills also has implications for labor migration. According to the Ministry of Labor and Social Welfare (MoLSW) there may be as many as 100,000 foreign workers from China, Thailand and Vietnam currently employed (officially and unofficially) in Lao PDR. The phenomenon of a large migrant worker population is not unique to Lao PDR, and is also present in Malaysia, Thailand and Vietnam. MoLSW estimates that there are approximately 250,000 workers from Lao PDR officially and unofficially employed in Thailand. Lao PDR primarily exports unskilled laborers while the imports are commonly semi-skilled and skilled.

Most of the population in Lao PDR is employed in agriculture, creating labor shortages in the manufacturing and services sectors. Shortages in these sectors are expected to persist. Based on the 2005 census, MoLSW estimates the agricultural labor force in 2010 employs 3.1 million and the non-agricultural labor force at 666,400. These employment estimates can be further broken down into 151,270 persons working in the service sector, 107,300 in industry and 407,830 in trade and other occupations. MoLSW also estimates that the labor force is growing at a rate of 2.5 percent per annum with 55,000 new workers entering the job market every year.

Despite the apparent job market growth, the 7th NSEDP forecasts a shortage of labor in the next five years. Similarly, approximately 29,000 skilled workers join the labor force every year. These skilled workers consist of 10,000 workers from the formal T-VET public sector; 10,000 workers from 22 private sector schools mainly in the fields of IT, business management and tourism; and 9,000 workers from short term occupational training and skills development centers of the MoLSW, the Lao Women’s Union, the Lao Youth Organization, and the Lao Trade Union.

Despite a shortage of skilled workers, formal technical and vocational schools experience difficulties recruiting students for their training courses. Private employers and officials from the public sector often speak of this mismatch between demand and supply. A recent Labor Market Survey (ADB 2008) states,

“There is no careers guidance or counseling structure or information systems able to deliver relevant labor market information to youths and adults about job requirements, opportunities and work placements. This should be considered a priority to reduce the continuing mismatch between labor demand and supply.”

Labor costs are relatively low in Lao PDR, suggesting a comparative advantage for employers. Labor costs in Lao PDR are significantly lower than regional neighbors such as in Vietnam and Cambodia. With this said, labor costs are comparable to the Kyrgyz Republic and slightly lower than in Nepal and Uzbekistan (Figure 34). Most notably, labor costs in the manufacturing sector are approximately one-third of labor costs in China, one-quarter of labor costs in Thailand and one-tenth of labor costs in Malaysia. In this respect, low wages might allow firms in Lao PDR to remain relatively competitive, despite lower productivity levels.

Unit labor costs in Lao PDR are roughly comparable with many of the comparator countries, but are higher than in China and Thailand. Firms in Lao PDR, Armenia, Malaysia, Moldova and Uzbekistan report that unit labor costs are approximately 32 to 36 percent of labor productivity (Figure 35). Unit labor costs are also slightly lower in Cambodia and Vietnam. Although labor productivity was slightly higher in these two countries, labor costs were also higher. Mongolia and Nepal, two land-locked comparator countries, have very high unit labor costs. In both of these countries the average firm is less productive and has higher labor costs than the average firm in Lao PDR. Unit labor costs in Lao PDR are, however, higher than in China and Thailand. Although the average firms in these countries have significantly higher labor costs than in Lao PDR, productivity ranks higher.
Employers in Lao PDR rarely provide training for their employees (Figure 36 and Figure 37). Only 11 percent of firms in Lao PDR said they offered training to their employees, one of the lowest among comparator countries. Sectors such as services, construction and hospitality identify skills as a binding obstacle and are less likely to offer training. More firms in wood and furniture manufacturing, garments, non-metallic and plastic materials offer training, and managers are less likely to identify skills as a constraint.

In recent years, the private sector has pro-actively sought approaches to overcome skilled labor shortage problems. Garments, tourism and construction sectors (see Box 4) have taken a lead to establish “dedicated” training centers with varying degrees of private sector representation. These training centers aim to upgrade mid-level skills for employed staff. Trained staff improves workforce quality and productivity by transferring their learned skills to new recruits.

In the short run, neither the public nor private education sectors are likely to satisfy the demand for skilled laborers. Government support should focus on building a close partnership with the private sector to identify training needs, and implement effective training programs that leverage private sector participation.

More research is required to better understand the skills mismatch and market dynamics in Lao PDR, which entails examining both the demand and supply side of the labor market. For example, more research could be pursued on incentive-based learning programs for workers, as well as employer incentives to invest in their employees. Firms in sectors such as services, construction and hospitality, that do not currently provide training, could potentially recruit trained workers from firms in the same sector, leaving little incentive to invest in building their employees’ capacities. This scenario results in a market failure for the training firm, as they do not benefit from the cost incurred.
Box 4: The emergence of the private sector in skills development – a means of resolving labor market supply and demand mismatches?

In the past, the supply of skilled labor in Lao PDR was the exclusive domain of the public sector (Ministry of Education and the Ministry of Labor and Social Welfare). Recently, in sectors such as construction, tourism and garments the private sector is now stepping in. As this trend grows, public policies will need to create more space for the private sector. Below are three examples of how the private sector responds to this demand.

Construction: The construction sector has expanded dramatically in the last few years. Representatives from the sector estimate that there may be as many as 126,000 employed in the 300 “A” and “B” grade contractors and the 1,000 or more subcontractors involved in civil works. The largest portion of this employment is in Lao PDR’s capital Vientiane, but there are also significant numbers in Pakse, Savannakhet, Luang Prabang and Khamouane provinces. The upper skill levels, or approximately 30 percent, consist of imported labor from Vietnam, Thailand and China. Daily wage rates for these semi-skilled workers depend on their function, but the typical rates are: 60,000 Kip (US$ 7) for Lao, 80,000 (US$ 9.3) for Vietnamese and 100,000 (US$ 11.6) for Thai workers. The daily rates for unskilled Lao workers run at about 30 to 40,000 Kip (US$ 3.5 to 4.6).

From a sample of 11 construction enterprises surveyed in the World Bank’s recent Enterprise Survey, 9 rated the availability of skilled labor as a “major” or “very severe” problem. Groups of construction enterprises have worked with the Ministry of Education to address this problem. Most construction businesses run on-the-job training for recruits, but acknowledge that this training is insufficient. Businesses would like to find service providers that could train their staff on a part time basis and on-site. For on-site training, construction companies are on average prepared to pay 10,000 Kip (US$ 1.2) per day (25-30 percent of the daily wage rate) for unskilled workers, and twice this amount for semi skilled workers.

Garments: The garment sector is one of the more established manufacturing sectors of Lao PDR’s economy. While firms learned to cope with high staff turnover rates for their machine operators (estimated to be about 40 percent per annum) they recognize that higher productivity requires access to skills upgrading for their supervisory personnel (approximately 3,000 in this sector). The Association of Lao Garment Industries (ALGI), with the assistance of the World Bank, has recently set up a garment-training centre, which focuses on building the capacities of supervisory staff. For high quality training, garment enterprises are prepared to pay up to US$ 10 per day/per person. The target for this centre is to train 300 to 400 supervisors each year and to become financially self sufficient after four years.

Tourism: In terms of arrivals, this sector generated annual revenues of US$ 276 million in 2008 and grew at a rate of 16 percent in 2009. The key to increase value in this sector is to target high-end tourists willing to pay for a unique experience. In contrast to construction and garments, labor in this sector needs to interact more directly with customers to create a high value experience. Consequently, an understanding of customer needs and language skills are absolutely critical.

The estimated employment in this sector is 17,000 jobs in approximately 2,300 hotels, guesthouses restaurants, resorts and entertainment businesses. A further 167,000 jobs are estimated to be linked to tourism sector in food supply, hotel support services, handicrafts, etc. The recent World Bank Enterprise Survey polled 57 businesses in this sector and 46 percent of this sample rated the availability of skilled workers as a major or severe obstacle to growth. Half of these enterprises rate this as their top constraint. The private sector, represented mainly by the Lao Hotels and Restaurants Association is now working closely with the Lao National Tourism Administration on a project, funded by the government of Luxembourg, on the establishment of a Lao National Institute of Tourism and Hospitality to train several hundred persons in housekeeping, food and beverages and tour operations.
6. ACCESS TO FINANCE

Access to finance was the second most often cited growth obstacle after taxes for small firms and skills for medium and large firms, despite the recent credit expansion. As discussed earlier, more firms in Lao PDR identify access to finance as a primary business obstacle compared to other countries (Figure 19). Access to finance is the second most cited obstacle by manufacturing and service industry firms (Figure 20) and small, medium and large enterprises (Figure 21).

While most firms have access to a bank account, very few get credit (Figure 38 - Figure 41). Ninety-two percent of firms surveyed have access to a bank account, the highest among comparator countries. At the same time, only 19 percent of firms have a loan or line of credit in Lao PDR, the lowest among comparator countries. It appears that, for investment purposes, alternative financing sources such as equity finance, supplier finance or other non-bank financing sources are not available. Less than 3 percent of firms use external financing sources for investments. As an alternative, a firm’s own internal resource covers 97 percent of investment costs. Firms in Lao PDR also provide more collateral coverage for the loan than in any comparator country. In Lao PDR, the value of collateral is on average three-times the value of the loan, compared to two times the value in Cambodia and Vietnam.

Making distinctions between usage and access is a major challenge when measuring access to finance. The statistic on the share of firms not using credit includes: (1) creditworthy firms that need, but are not able to obtain, financing; (2) firms that do not have viable projects, are not credit worthy and not able to obtain finance; and, (3) firms that do not require external financing. Only the first category of firms, or those who have viable projects, need financing but are not able to get it, are financially constrained. The fact that very few firms in Lao PDR use finance indicates that only a few firms have viable projects, or that internal funding sources fully satisfy finance expectations.
Very few firms in Lao PDR apply for credit from formal institutions (Figure 42). Only 11 percent of firms in the survey applied for loans compared to 50 percent in Vietnam and Mongolia. The statistic is the lowest among comparator countries. One possible reason is a low demand for financing due to a low level of investments. Figure 42 illustrates that firms in Lao PDR are less likely to purchase fixed assets than firms in comparator countries. Only 30 percent of firms in Lao PDR report that they have purchased fixed assets in the past year, compared to over 60 percent in Mongolia and Vietnam.

This difference does not fully explain the low number of credit applications. In Lao PDR, only 10 percent of firms that reported to have purchased fixed assets applied for credit, compared to 57 percent in Vietnam and 54 percent in Mongolia. When questioned on the reasons for not applying for credit, 63 percent of firms responded that they do not need funding. This unusually high rate of reliance on internal sources of funding, points to important inefficiencies in the market.

Anecdotal evidence suggests that informal finance, specifically ROSCAs or locally known as houay, are very popular among small businesses. It is estimated that more than half of all small businesses are participants of a ROSCA, indicating significant demands for finance not met by the formal financial system (see Box 5). Related analysis of growth constraints also shows that weak financial intermediation is the binding constraint to the relatively low rates of domestic capital formation in Lao PDR, as opposed to a lack of available investment opportunities (Davading 2010).

Firms in need of funding, but that did not apply for a loan, identify complex application procedures, a need for informal payments and high collateral requirements as their primary impediments (Figure 43). Complex application procedures are by far the most common reason not to apply for a loan. The second most often cited obstacle is the need for informal payments, followed by high collateral requirements.

A lack of bank financing availability for investment purposes and strict requirements for collateral in the form of land and buildings suggests an underdeveloped banking sector. This could potentially become a more severe binding constraint for firms to grow. Retained earnings finance as much as 96 percent of working capital and 97 percent of investment capital. None of the surveyed firms financed any investment through bank financing in 2008; most loans were short-term and awarded within a year from the time of the survey. Additionally, collateral requirements were high. Land and buildings account for 90 percent of all collateral. Registering a property as collateral is a lengthy process, as it requires a number of procedures, which makes it difficult for firms to mobilize collateral. This creates a major barrier for smaller firms, which often do not own land or real estate that could be used to secure a loan.

Currently, banks do not accept movable assets such as vehicles, machinery, or inventory as collateral. However, the passing of the implementing decree on Secured Transactions in June 2011 and the ongoing establishment of the collateral registry are expected to facilitate the usage of movable assets as collateral. This is anticipated to contribute to improved access to finance for SMEs.
Sectors experience irregular access to credit, depending on firm size category. Only 16 percent of small businesses and 26 percent of medium size firms utilize a credit line, compared to 35 percent of large enterprises.

Credit is concentrated in certain industries. Nearly 70 percent of firms in the construction industry have a loan or a credit line. Large and medium size firms in the garments industry are also more likely to have credit.

The rapid expansion of credit in recent years poses risks to the banking system (Figure 46). The number of banks in Lao PDR increased from 12 in 2006 (including branches of foreign banks) to 25 in 2011. As a result, the ratio of credit to the private sector to GDP nearly tripled from 7 percent in 2005 to 20 percent in 2010. Credit to SOEs grew faster than loans to the private sector (Figure 47). Year-on-year credit growth in 2008 and 2009 reached 70 percent. However, this rapid expansion of credit concentrates on a few select industries, and poses risks for the financial system.

Non-performing loans (NPLs) remain low, and experience demonstrates that NPL numbers do not always fully reflect the risks in credit portfolios, especially in a fast credit growth environment. The rapid expansion of credit is placing strains on the central bank’s ability to adequately supervise banks. Capitalization of the three state-owned commercial banks remains below the prudential limits and limited reporting on the financial condition of banks raise questions on the sustainability of the current credit boom.
**Box 5: Informal finance - how Rotating Saving and Credit Association (ROSCA) are filling the gap in private sector demand for finance**

A ROSCA, locally known as a *Houay*, is a group of individuals that agree to meet for a defined period of time in order to save and borrow together. For example, a group of 12 persons may contribute 1 million Kip per month for 12 months. The 12 million collected each month is loaned to one member. After having received the lump sum amount, he/she then pays back the amount in regular monthly contributions. Depending on the cycle in which a member receives his/her lump sum, members alternate being lenders and borrowers.

Anecdotal evidence suggests that this is the most popular informal finance system among small businesses in Lao PDR. It is estimated that at least half of small business owners are participants of a ROSCA. Interviews with business owners participating in ROSCAs revealed that members could potentially pay up to 50-60 percent interest per year, or alternatively receive approximately 40-50 percent interest in income depending on the cycle in which a member receives his/her lump sum.

ROSCAs can take place in a number of variations under the key principles described above. Typical variations include:

**Membership:** The leader or organizer of the ROSCA normally selects its members. Very often ROSCAs are organized based on geographical locations, business lines or social affiliations.

**Contribution amount:** The amount to be contributed in each cycle and length of the period are determined by the number of participants, the total winning amount and other social economic factors such as average income of the participants. In most cases, contributions are in the form of shares, thus allowing one member to have more than one share.

**Cycle period:** The frequency with which contributions have to be made in each cycle varies. This can be daily, weekly, or monthly depending on the amount and number of participants. In general, the smaller the amount, the shorter the contribution cycle.

**Mode of selecting winners:** The winner is most commonly selected through a bidding process, where members bid for a lump sum amount in each cycle. The member who wins the bid will receive the lump sum minus the bid amount. Other members pay their contributions, which equal their share minus the bid amount. In some cases, the winner receives the full lump sum amount from all members and subsequently pays his or her share plus the bid amount. The second mode of deciding the winner is through lots, where a lottery determines the member who gets the lump sum in each cycle period. This mode is used every time, or when there are no members willing to bid. This happens quite often in latter cycle periods. In some exceptional cases, the winner is decided by consensus.

ROSCAs have a number of advantages that other formal and informal financing schemes do not offer, but also have important limitations. Positive attributes include access to the establishment and operational procedures (which are decided by its members); the opportunity to save and maximize returns; the equal distribution of profits on accumulated contributions; and all members equally share the risk of default (in some variations the leader gets more profits and thus shares a higher risk in case of default). The basic requirements for setting up a ROSCA in Lao PDR are: 1) establishing a credible leader with a good financial track record; 2) agreeing on a list of participants assembled by the leader (in most cases, participants know each other well); and 3) deciding on a number of cycle periods, dates and methods of interest payments.

ROSCAs present disadvantages as well as they are quite inflexible in terms of the amounts an individual can borrow and timing of loans. There is also no protection for savers in case of a collapse of a ROSCA due to poor loan repayment. Additionally, borrowing rates are high.

**Source:** Based on interviews with selected ROSCAs’ participants in the Morning Market (www.gdrc.org/icm/suppliers/rosca.html).
Access to electricity has improved significantly since 2005 and is no longer identified as a major constraint by most firms (Figure 48 and Figure 49). Only about 22 percent of firms in Lao PDR identified electricity as a major obstacle. This is slightly higher than in comparator East Asian countries but much lower than in other comparator countries. The share of firms in manufacturing that identified electricity as a major constraint decreased from 41 to 21 percent between the 2005 and 2009 surveys. Only 1 percent of firms in the survey reported power outages in the previous fiscal year and of these, more than a half of firms indicated that disruptions occurred only a few times a year (less than once a month). Even though the number of firms owning a generator increased, firms depending on the generators for electricity decreased. These indicators are in line with the perceptions by firms that access to electricity is improving.

Perceptions of constraints posed by electricity significantly vary across industry and region (Figure 50 and Figure 51). Industries that are more dependent on uninterrupted power supply such as wood and furniture, and garments manufacturers are more likely to identify access to electricity as an important obstacle.
Lao PDR made major progress in expanding access to electricity. The number of households with electricity connections increased from approximately 16 percent in 1995 to 45 percent in 2004. In June 2009, connection rates reached 63 percent - the fastest rate for a country at this level of income globally. Rapid expansion of electrification, now with the focus on rural areas, remains one of the major priorities of GoL and the power sector.

The GoL's goal is to provide electricity to 90 percent of the country's households by 2020. As access to electricity rapidly moves to remote areas, on-grid rural electrification has become more costly. These growing costs led the GoL to promote off-grid options, with an emphasis on renewable technologies. However, the expected private sector investment in off-grid renewable energy has slowly materialized due to a lack of financing from banks.

The financial sustainability of the power sector is one of the main objectives of the Government of Lao PDR. Electricité du Laos (EdL) is the utility company that owns and operates the GoL’s transmission and distribution system. EdL also operates existing hydropower plants, with the exception of the Nam Thuen 2 hydropower mega-project. Although it remains fully owned by the GoL, EdL was corporatized in 1997, with cost and profit centers created within the company. EdL’s operational efficiency and financial viability have improved remarkably over the past years as a result of the implementation of the power sector’s financial sustainability action plan.

EdL reported a profit for the first time in 2007, due to the 2005 tariff adjustments; agreed tariff reforms from 2005 to 2011; a reduction of distribution system losses of more than 20 percent in 2005 to approximately 13 percent in June 2009; and a reduction of arrears owed by Government agencies after settlement. EdL has significantly improved its technical capacity and is able to carry out independent system planning, design, supervision of construction, operation and maintenance, and safeguard management.
8. CUSTOMS AND TRADE FACILITATION

The first Lao PDR Investment Climate Assessment, which drew upon an enterprise survey conducted in 2005, found evidence that exporters face a heavier regulatory burden than non-exporters. The study indicated that senior management of exporters spent more time dealing with government regulation than non-exporters (4.9 percent of their management time for exporters and 3.6 percent for non-exporters). Exporters also reported a higher number of inspections (29.1 per year for exporters compared to 13.0 percent for non-exporters). Although exporters reported more customs inspections than non-exporters (an average of 5.6 percent per year compared to 3.8 percent for non-exporters), the study found that this difference was not sufficient to account for the full difference in number of total inspections. The Assessment concluded that greater regulatory burdens were being imposed on exporters.

Assessment conclusions supported the development of a series of policy and investment recommendations. Since 2005, the GoL has progressively reformed trade facilitation and customs procedures aiming to streamline and simplify the exporters’ operating environment. Similarly, a number of investments by the World Bank and other donors in areas such as customs modernization and trade facilitation are assisting with the financing of the government’s program.

The new enterprise survey presents an opportunity to revisit this issue and answer the question: do exporters still face a heavier regulatory burden than non-exporters?

Data from the new Lao PDR enterprise survey provides detailed productivity and performance information, as well as information on firm perceptions of business environment constraints for 360 enterprises (including 147 manufacturers) collected by the World Bank across four urban centers in late-2009.

New data suggests that more exporters are likely to report key regulatory constraints as a problem than non-exporters. The largest difference between exporters and non-exporters is in business licensing and permits. Management in exporting firms are almost three-times as likely to describe this issue as a “major” or “very severe” constraint to their business, compared to non-exporting firms (Figure 52). Exporters are also twice as likely as non-exporters to describe customs and trade regulations as a constraint. The differences are less acute in labor regulations or tax administration, although in both cases, exporters are still more likely to describe regulations as a problem. Tax administration stands out as the most concerning regulatory issue, as management of both exporting and non-exporting firms see this issue as a serious problem (20 and 18 percent, respectively).

In comparison with non-exporters, exporters spend significantly more time with regulatory procedures. The average exporting firm reports spending 5.6 percent of senior management time to navigate regulations. This is significantly more than the 1.8 of time spent by management in non-exporting firms (Figure 53). In 2005, research found that senior management of exporters spent on average 4.9 percent of their time with regulators. This figure was comparable to the 3.6 percent for non-exporters. Since 2005, regulatory procedures have intensified for exporters, while conditions for non-exporters have slightly improved.

Exporters receive fewer visits by tax officials, but more visits by other (non-tax) officials, in comparison to non-exporting firms. The average number of inspections by tax officials per year appears to be fairly equal between exporters and non-exporters, with non-exporters receiving slightly more inspections by officials every year (3.4 and 3.2 respectively) (Figure 53). With this said, other officials visit exporters approximately 3 times a year, while non-exporters receive 2.3 annual visits on average. In comparison to data collected in 2005, the number of inspections has substantially reduced. In 2005, exporters reported approximately 29 annual inspections, while officials visited non-exporters 13 times altogether per year.
Although border clearance efficiency in Lao PDR compares favorably to a number of small landlocked economies, it lags behind neighboring countries. On average it takes 7.7 days for exporters to clear customs in Lao PDR, compared to 4.6 in Vietnam and 1.5 in Cambodia. There is a significant degree of variation in responses; however, some firms report that border clearance can reach 30 days. It takes slightly longer to clear customs for imports – on average 10 days, similar to Vietnam.

These results are consistent with the World Bank’s Logistics Performance Index (LPI) (Figure 55 and Figure 56). The LPI suggests that the Lao PDR has modestly improved its connection to international markets, as a result of the frequency of which international shipments arrive on schedule and the ability of shippers to track and trade consignments. However, performance in the quality of trade-related infrastructure, the efficiency of border processes and in the quality of logistics services available in country could be improved. More importantly, while Lao PDR compares favorably with other landlocked low-income countries, the country lags behind regional competitors. Continued reforms and investments may be needed to strengthen trade facilitation performance and offset the trade-related disadvantages associated with being landlocked.
Figure 55: Lao trade environment improved in a number of dimensions between 2007 and 2009

Figure 56: Lao continues to lag behind its neighbors on a number of trade environment characteristics

Source: World Bank LPI
9. CORRUPTION

Although firms do not frequently identify corruption as an obstacle, most firms report that they need to make informal payments or give gifts to public officials (Figure 57 and Figure 58). Approximately 20 percent of firms report that corruption is a major obstacle for doing business. This share is significantly higher than in Vietnam, but is similar or lower to the numbers in other comparator countries. While reported corruption obstacles are low, 40 percent of firms stated that they make informal payments to public officials to expedite processing. This percent is higher than in many comparator countries.

The share of firms that report the need to give gifts to get an operating or import license in Lao PDR is the highest among comparator countries. Almost all firms, 88 percent in Lao PDR, said they are expected to give gifts to obtain an operating license (Figure 59). Sixty percent of firms claim that they are also expected to offer gifts for import licenses (Figure 60).

More than 30 percent of firms report that gifts are expected in meetings with tax officials, which is lower than in Cambodia, Nepal and Tajikistan, yet still high. Even though firms in Lao PDR do not view corruption as a major constraint to their operations, it undoubtedly imposes substantial costs for operating a business, which may affect their competitiveness. The lengthy timeframe for obtaining a business license could also be linked to this finding.⁶

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Source: World Bank Enterprise Surveys
10. GENDER AND ENTERPRENEURSHIP

A third of all firms in Lao PDR are female-owned, which compares favorably to many countries and regions, but is lower than the average for East Asia. International studies suggest that gender equity, and in particular the extent to which women are empowered economically, is closely correlated with economic growth and poverty reduction. In Lao PDR, around 31 percent of formal enterprises with more than five employees are female-owned (Figure 61). This is in line with averages in many other countries and regions, but is below the average for East Asia.

Female-owned firms are more likely to operate in the retail sector. Nearly a half of all businesses owned by women are in retail, compared with less than 20 percent of retail firms with no female owner. Conversely, female entrepreneurs are less likely to operate in the manufacturing sector. For example, women reportedly own 40 percent of manufacturing firms, while 53 percent of manufacturing firms are non-female owned.

Female-owned establishments are also less likely to be part of a larger firm. Only 5.6 percent of firms owned by women reported that they are part of a larger firm in comparison to 11.4 percent of firms owned by men. Private individuals or domestic companies own over 90 percent of female-owned businesses and less than 10 percent are foreign-owned. This contrasts with non-female owned firms, of which 70 percent are domestically owned and 30 percent are foreign owned.

Firms owned by women are much smaller in terms of number of employees compared to firms owned by men; however, female-owned businesses are growing at a much faster pace (Figure 62). The average size of businesses owned by women on start-up is 29.5 employees, compared to 94.9 for businesses owned by men. A buoyant economy in Lao PDR supported growth in business size at the close of the last financial year. For example, the average female-owned firm employed 66.8 people at the end of 2009, while the average non-female owned firm employed 154.6 people. Thus, the average female owned business has more than doubled in terms of employment over the last three years.

Female and non-female owned firms do not differ significantly in average age. The average year of establishment for both female and non-female owned firms is 1996 and 1997. Similarly in regards to turnover, firms owned by women report significantly lower annual sales, but higher growth rates in comparison to firms owned by men.

Senior management in female-owned firms tends to be less educated, in comparison to management in male owned firms. In Lao PDR, 43.5 percent of male owned firms employ a senior manager with a graduate degree from a foreign university. Another 2.5 percent have graduate degrees from universities in Lao PDR and 17.2 percent have an undergraduate education. This contrasts with just 20 percent of senior managers in businesses owned by women who have a foreign graduate degree.
Technology is less widespread amongst businesses owned by women. The use of communications technology appears to be relatively well spread amongst firms sampled, as over half of all firms use email to communicate with clients and 45 percent of firms have their own website (Figure 63). However, there remain differences between female and male owned firms. For example, 61.9 percent of male owned enterprises report using email to communicate with clients, in comparison to 38.1 percent of female-owned firms. Similarly, 52.7 percent of enterprises owned by men have their own websites compared with 28.3 percent of enterprises owned by women.

Female-owned businesses are less likely to export directly, and are financially less complex. National research suggests that exporting directly requires a minimum level of managerial capacity. While businesses owned by women are less likely to export directly compared to businesses owned by men, a higher level of indirect exports partly compensates (Figure 64). This would suggest that female-owned businesses are able to produce export-standard goods and services, but perhaps lack the scale, capital or the necessary contracts and know-how required to sell abroad. Female-owned firms are also less likely to have a bank account, overdraft or credit line and on average own assets worth less than a quarter of the assets owned by male owned firms.

![Figure 63: Female owned firms are less likely to use modern communications methods](image)

Source: World Bank Enterprise Surveys

![Figure 64: Businesses owned by women are also less likely to export directly](image)

Source: World Bank Enterprise Surveys

![Figure 65: When asked to identify the biggest constraint, female-owned firms are more likely to cite tax rates or access to finance](image)

Source: World Bank Enterprise Surveys

Businesses owned by women identify tax rates or access to finance as their primary obstacles (Figure 65). In comparison to male-owned businesses, female-owned businesses appear to be more constrained in these two areas. Firms owned by women are also much less likely to identify workforce skills as a constraint. These results are in part driven by the fact that female-owned firms are often small and concentrated in the trade and services sectors.
When controls for firm characteristics such as size, age of firm, sector, and education level of managers are applied, there appear to be fewer differences in the intensity of business environment constraints faced by male and female owned firms respectively. While probability estimates on the severity of constraints do show access to finance as being more likely to be a binding constraint among female-owned firms, the result is not statistically significant. This suggests that the gender of the firm owner is perhaps less important in Lao PDR as an explaining factor of business performance, compared to the sector of business operations, size of the firm, and the education level of the manager. Only with respect to the courts and access to commercial justice is the difference between male and female entrepreneurs statistically significant, as firms owned by men are more likely to report these factors as being a constraint.

In conclusion, broader policy interventions that target improved access to finance and simplified tax rates for small businesses are likely to have highly positive gender outcomes. Similarly, while many of the key differences in terms of performance and constraints appear to be determined more by the sector and size of the business (rather than the gender of the owner), key questions remain about the proximate determinants as to why women entrepreneurs are less likely to be found in larger and more sophisticated sectors. This suggest that greater attention should be paid to understanding the underlying determinants of economic opportunity, particularly with regard to the links between educational attainment and asset endowments, as well as success and opportunities as an entrepreneur.
11. CONCLUSIONS AND RECOMMENDATIONS FOR POLICY

The Second Investment Climate Survey provides important new information on the nature of business environment constraints in Lao PDR and highlights the need for more systematic data collection to monitor national economic progress. The second enterprise survey conducted by the World Bank in 2009 builds on the preliminary 2005 survey and complements other data collection efforts, such as enterprise surveys conducted by the GIZ. While these surveys provide valuable data, they are not a substitute for systematic data collection on firm performance in Lao PDR collected by national agencies. Further efforts to strengthen data collection, surveying and analytical capacities of relevant ministries and agencies would provide decision makers in Lao PDR with more reliable information to set policies and monitor progress.

The survey results demonstrate that business environment reforms have significantly improved in Lao PDR over the past five years. The results however, also identify a new generation of challenges that need to be addressed. The survey documents major improvement in access to electricity and other “hard constraints” that relate to infrastructure. As Lao PDR’s economy continues to transform, the next challenge will be to address “soft constraints” related to skills, access to financing and implementation of a growth-friendly tax regime for small businesses. The survey results and extensive interviews conducted for this report also confirm that a greater focus on effective implementation of recently passed reforms is crucial to improve the competitiveness of Lao PDR’s economy.

Effective implementation of the recently passed reforms is an essential element for improving Lao PDR’s investment climate. While a number of important acts and laws have been passed in recent years, implementation of some of them has been slow and partial. For example, Lao PDR has one of the least complicated business entry regulations, as defined in the Enterprise Law. The country also has one of the most liberal Investment Promotion Laws with very competitive investment incentives. With this said, these laws and regulations are not fully implemented primarily due to unclear implementation mechanisms and weak coordination between line ministries, and central and provincial authorities. Regulatory reforms should focus on improving administration of existing laws. Implementation of the regulations would also need to be actively monitored, which in turn requires improvements in data collection at both the program or initiative and country level.

This Assessment reflects the risks that Lao PDR may face in the near future with managing growth diversification in the context of a natural resources boom. Research suggests that export concentration in a limited number of sectors carries significant economic risks, including heightened exposure to terms-of-trade shocks, and a potential loss of competitiveness in non-natural resource based sectors. The findings of this assessment suggest that Lao PDR is already experiencing some of the early signs of this process. Domestically oriented firms are earning higher returns than exporters; the services sectors are growing faster than manufacturing; the non-resource private sector is struggling to access finance; and disparities are occurring in the labor market.

The three major areas of constraints identified by the Second Investment Climate Survey are taxation, an inadequately educated workforce and access to finance. The shift to “softer constraints” reflects the success of recent reforms to improve basic infrastructure and address fundamental regulatory barriers. The survey also suggests that firms face different constraints. As firms face a wide-range of needs, the next generation of reforms may need to be more focused to address the specific needs of each economic sector.

**Labor and skills**

The survey identifies an inadequately educated labor force as a major constraint, especially for larger firms. The labor market supply, which is mostly public sector driven, does not meet national workforce demands with the type of skills demanded by the private sector. In some sectors, the private sector is becoming more involved in skills training. Resolving the problem of skill mismatches will require initiating mechanisms that support the private sector’s demand to guide skills and training service providers more effectively.
A further and in-depth analysis of skill mismatch is crucial to guide policy in this area. Such an assessment needs to evaluate current and future demand for skills, areas of skills shortages, causes of skill shortages and mechanisms to reward skill acquisition in labor markets. Similar assessments in comparator countries usually include firm surveys and household surveys as primary data. Firm surveys help detect mismatches and understand how employers address skills constraints. They can also provide information on behavioral patterns of both employers and employees (age and experience of employees; nationalities of workers; length of tenure on the job; and opportunities for training and job promotion). Household surveys provide an even more extensive picture of the current level of skills in the labor force and skill mismatches as they include the unemployed as well as the employed, as well as the formal and informal sectors.

To address current and future labor shortages and skill mismatches it is important to continue strengthening technical vocational education and training initiatives, as well as to continue to forge partnerships with the private sector. There are currently few TVET initiatives in Lao PDR. Most of them aim at improving the quality of existing TVET providers through enhanced curriculum and teacher standards, as well as upgrades to equipment and facilities. Other initiatives seek to better align the incentives of the private sector to participate more actively in the provision of TVET or strengthen the governance and management of existing TVET providers. Unfortunately, these initiatives remain limited in terms of coverage.

International experience suggests that upon completion of secondary school and other formal training, it is via, on-the-job-training that human capital is developed most effectively. Therefore, supporting TVET is critical to fully align private sector incentives with the government’s skills agenda by designing policies that promote on-the-job training and public-private coordination. Public-private bodies, such as the National Training Council, may have a role to play in this process if the private sector participates fully and effectively. The introduction of cost-sharing schemes for specific training courses in conjunction with private businesses and the establishment of voucher systems to help existing workers upgrade their skills are just two examples. As a result, private-public collaboration is crucial to address labor market challenges.

A regular monitoring system of labor force trends is needed to better understand structural market changes. One-time surveys, such as those proposed for skills assessment, can provide a detailed picture of the current skills situation and help design appropriate policies. However, one-time surveys will not permit evaluations of the impact of policies and the behavioral and structural changes that can result unless they become institutionalized and conducted at regular time intervals. Without a monitoring system in place, it would be impossible to further adjust or adapt policies and programs. To address this concern it might be worthwhile to develop a Labor Market Information System. This system would allow the government to undertake regular data analysis, and carry out studies on specific training programs.

To break the cycle of skills shortages in Lao PDR in the longer term, the government will need to continue strengthening its basic education system. It is essential to view skills development as a continuum between education, work experience and training and to include the development of the education sector as part of a skills development strategy. As shown by research and international experience, a solid basic (primary and secondary) education provides skills that facilitate (and thus reduces the costs of) subsequent training (formal or on-the-job). Secondary education graduates tend to fill a large share of entry-level jobs in the services sector (a sector in expansion in a transition economy); but if inadequately trained, they can also easily form a pool of unemployed and dissatisfied workers.

Taxation

The taxation regime may need to balance national objectives for fiscal revenue generation with broad based economic growth. In Lao PDR, as in many other countries, micro, small and medium enterprises (MSMEs) represent a small portion of the total tax revenue collection, estimated at 10-15 percent. Meanwhile, MSMEs account for over 90 percent of all enterprises, and represent a potentially significant source of growth. A successful taxation regime for MSMEs must be simple and transparent to reduce the cost of implementation, monitoring and enforcement by relevant government authorities. Recent tax reforms in a number of transition economies have shown that tax simplification also leads to a greater rate of compliance thus increasing the tax base in a country.
The GoL should consider the introduction of a separate taxation regime for microenterprises based on a flat patent fee. Microenterprises represent the vast majority of all firms in terms of number; yet, only generate a very small portion of the total fiscal revenue. In a clear majority of cases these firms also lack the capacity to maintain formal accounting records. The introduction of a flat patent fee provides several advantages over the application of a turnover based tax for micro businesses: (1) it is not based on any requirement to maintain books and records, thus reducing the compliance burden; (2) it is easy to administer and reduces tax administration costs; and, (3) it is transparent and reduces the risk of disputes and negotiation between the taxpayer and the tax administration. The main disadvantage of the system is that it is based on standardized calculations and does not take into account the performance of the individual business entity. However, given the need to ensure cost-efficiency of micro business taxation, this would be acceptable as long as the micro business tax burden is kept at a reasonably low level.

For small taxpayers with a turnover above a new micro threshold and below the mandatory VAT registration threshold, a turnover based simplified tax is appropriate and follows good international practice. This simplified regime should provide sufficient flexibility to differentiate between broad groups of activities and still avoid ambiguities between possible categories. Although, the use of multiple categories increases the likelihood of disputes over the fairness of the approach.

Many simplified turnover-based small business tax regimes worldwide only distinguish between two small business segments: businesses in the trading sector and non-trading businesses. A lower turnover rate then is applied to trading businesses, reflecting their generally lower profit margins as a percentage of turnover. The legislation also should be clear that these small taxpayers have an option to be either taxed in the simplified regime based on turnover or in the general taxation regime (subject to the capacity to keep books and records required for the application of the general regime). In order to avoid frequent moves between the presumptive and regular regimes, to “cherry-pick” the most favorable system, a return to the presumptive system should only be allowed after a minimum of 2 or 3 years in the general regime.

Revise and strictly enforce accounting standards for small and medium sized businesses. Following the introduction of the VAT, tax and accounting requirements may need to be aligned by increasing the threshold for basic accounting to 400 million Kip (approximately US$ 50,000). Tax laws generally include special accounting rules for tax purposes for micro and small businesses. Maintaining a basic journal of daily cash transactions (which in itself is beneficial for a small firm’s operations) is a sufficient foundation for a simple presumptive regime based on turnover. In the longer term, if small firms are to be administered cost-effectively, and if the goal of widening the tax base is to be achieved, there should be a move away from a system based on arbitrarily assessing the majority of small taxpayers. Instead, the administration may need to move towards taxpayer self-assessment and turnover verification based on risk. The next administrative reform steps therefore should include the development of basic risk parameters for small businesses to crosscheck declared turnover with selected indicators. Audit activities should then concentrate on cases in which declared turnover differs substantially from presumed turnover.

Consider abolishing the minimum tax. For taxpayers filing returns based on ‘normal’ or ‘extended’ accounting - there is a requirement to pay a minimum profit tax based on turnover (0.25 percent for manufacturers and 1 percent for services firms). In the event that the business reports losses or has paid tax installments on profits that are less than the minimum profit tax, they are required to pay the difference. The failure to allow exemption nullifies the value of the provision in the law for three-year loss carry forward for businesses. The plan to abolish the minimum tax as part of the revision of the General Tax Law would contribute to an improved investment climate and facilitate the move of businesses from the lump sum into the standard tax regime.

The tax law and its implementing regulations should be revised with a particular focus on clearly defining administrative procedures and rights as well as responsibilities of taxpayers and tax administrators. A number of important legislative changes have taken place in recent years, but in a number of cases implementation of the new legislation has been slow. To ensure the reforms bring desired results it is essential to speed up implementation, including issuance of necessary regulations and enhancing the capacity of the responsible authorities to implement the new regulations. Some of the critical next steps should include formulation of the implementing decree and instructions for the new unified Investment Promotion Law in order to align them with the amended Tax Law and ensure quick processing of VAT refund requests and refund payments to exporters.
Access to finance

One of the key challenges in the financial sector is to ensure a balance between policies aiming to improve access to financial services and enhancing financial sector soundness and stability. Outstanding credit levels in the economy more than doubled in the past two years. However credit growth is uneven, concentrated in certain industries, such as construction, and predominantly reaching only large firms. Small and microenterprises are rarely accessing financing from banks and instead rely on costly informal sources of financing. A continued effort to expand access to finance for small and microenterprises and strengthen bank supervision is crucial to ensure sustainable growth.

Promoting fair competition in the banking sector can support broad-based access to finance. The Bank of Lao PDR has encouraged the entry of new players into the market by issuing a number of new bank licenses in recent years. This is a first step towards a more competitive financial market in Lao PDR. It is also important to continue reforms creating a level playing field for state-owned and privately owned banks.

Development of an efficient system for registration of movable collateral can help reduce reliance on real estate as the main form of collateral. Most banks require real estate or land as collateral to secure loans. Small and medium enterprises lack this form of collateral and thus are unable to obtain financing, especially the longer term finance necessary for investment. Legislation enabling the use of movable collateral and an effective registration system for collateral can make a major improvement in easing access to credit for SMEs. Even though the Secured Transactions Law was passed in 2005, implementing decree is not yet issued, slowing down implementation of the legislation. For the legislative reform to be effective, the next step requires issuance of an implementing decree and the establishment of necessary resources to develop an effective collateral registration system and processes.

Improvements to the credit information registry may help improve access to finance as well as enhance risk management abilities of lenders in Lao PDR. The Bank of Lao PDR recently launched an online credit information registry, an upgrade from the previous fax-based system. While this is an important first step in improving credit information systems in Lao PDR, it is important to maintain momentum and ensure that all lenders supply relevant information to the registry as well as use it in the credit granting process.

Improve the availability of long terms funding for investment purposes. Even when financing from banks is available, it is usually short term. The ability to offer longer term funding to a large extent depends on the expectations of the market participants about the overall macroeconomic stability and inflation. In this respect, the BoL plays the key role in ensuring macroeconomic stability and financial sector soundness.

As the experience in other transition economies demonstrates, rapid expansion of the financial sector needs to be actively managed, especially given the limited experience of the Lao PDR banking sector to manage risks in their lending portfolios. To this extent, the BoL may need to continue focusing on strengthening its banking supervision functions. The role of the state financial institutions in providing longer term financing may also need to be considered.

As more private-owned financial institutions enter the market, the role of state financial institutions should be reviewed to focus on providing longer term financing. There is no ‘quick fixes’ for addressing the challenges of providing long term financing for investment purposes. International experience shows that dedicated funds, directed or subsidized lending or credit facilities only show limited effectiveness in addressing this challenge. Instead, the government’s role should be on delivering a sustained and comprehensive long-term effort to strengthen the overall financial sector soundness along with policies to encourage broader outreach of the financial institutions.

Improving transparency and financial literacy among borrowers is another important element in reducing information asymmetries, improving access to finance, and reducing risks in the financial system. High levels of informality and lack of reliable financial records among firms are often stated by banks as one of the main challenges in lending to SMEs. Efforts to simplify and standardize accounting standards for SMEs will not only facilitate compliance with tax regulations but can also contribute towards greater access to finance. As many micro-entrepreneurs often borrow as individuals the issue of financial literacy and capability is also an important constraint. As in other transition economies, many individuals in Lao PDR are not familiar with the services offered by commercial banks. Evaluating specific gaps in the level of financial literacy would be the first step in defining an approach to improving financial literacy and enhancing transparency in financial markets.


The Lao PDR Enterprise Survey 2009 was carried out as part of the Indicators Survey component of the World Bank East Asia and Pacific Enterprise Survey 2009. The objective of the survey was to obtain feedback from enterprises from four major urban centers on the state of the country’s investment climate. The survey covered a broad range of investment climate topics including access to finance, corruption, infrastructure, crime, competition, and performance measures.7

The sample for Lao PDR was selected using stratified random sampling. Stratified random sampling was preferred over simple random sampling for several reasons:

1. To obtain unbiased estimates for different subdivisions of the population with some known level of precision.
2. To obtain unbiased estimates for the whole population. The whole population, or universe of the study, is the non-agricultural economy. It comprises: all manufacturing sectors according to the group classification of ISIC Revision 3.1: (Group D), construction sector (Group F), services sector (Groups G and H), and transport, storage, and communications sector (Group I). Note that this definition excludes financial intermediation (Group J), real estate and renting activities, and all public or utilities-sectors.
3. To make sure that the final total sample includes establishments from all different sectors and that it is not concentrated in one or two of industries/sizes/regions.
4. To exploit the benefits of stratified sampling where population estimates, in most cases, will be more precise than using a simple random sampling method (i.e., lower standard errors, other things being equal).
5. Stratification may produce a smaller bound on the error of estimation than would be produced by a simple random sample of the same size. This result is particularly true if measurements within strata are homogeneous.
6. The cost per observation in the survey may be reduced by stratification of the population elements into convenient groupings.

Three levels of stratification were used in this country: industry, establishment size, and region. Industry stratification was designed in the way that follows: the universe was stratified into 23 manufacturing industries, 2 services industries, retail and IT, and one residual sector. Size stratification was defined following the standardized definition for the rollout: small (5 to 19 employees), medium (20 to 99 employees), and large (more than 99 employees). For stratification purposes, the number of employees was defined on the basis of reported permanent full-time workers. This seems to be an appropriate definition of the labor force since seasonal/casual/part-time employment is not a common practice, except in the sectors of construction and agriculture.

In total 360 firms, representing eligible universe of 2,420 firms from 4 urban centers, namely Luang Prabang, Vientiane Capital, Savannakhet, and Champasack were interviewed (Table A1.1).

Two versions of questionnaires were used – one for manufacturing and one for service firms. The surveys were implemented following a two-stage procedure. In the first stage a screener questionnaire was applied over the phone to determine eligibility and to make appointments; in the second stage, a face-to-face interview took place with the Manager/Owner/Director of each establishment.
**Table A1.1:** Number of firms in an eligible universe and in a completed interview sample.

<table>
<thead>
<tr>
<th>Region</th>
<th>Size</th>
<th>Universe</th>
<th>Completed questionnaires</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Manufacturing</td>
<td>Retail</td>
</tr>
<tr>
<td>Champasack</td>
<td>Small</td>
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<td></td>
<td>Medium</td>
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<td></td>
<td>Large</td>
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<td></td>
<td>Region total</td>
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<tr>
<td>Luang Prabang</td>
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<td></td>
<td>Region total</td>
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<td></td>
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<td></td>
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<td>Grand total</td>
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This annex presents econometric results of the analysis of the perceptions of firms about various aspects of investment climate.

**Methodology.** The methodology used in this section is similar to the methodology used in a recent paper by Gelb, Ramachandran, Shah and Turner (2006) that used data from seven countries in Africa (Kenya, Madagascar, Senegal, South Africa, Tanzania, Uganda, and Uganda) to look at differences in perceptions within and between countries. The question of how different factors, including ownership, affect access to credit for microenterprises is examined by estimating different versions of the equation below:

\[
\text{Perception about IC}_i = \beta_1 + \beta_2 \text{Ownership}_i + \beta_3 \text{Size}_i + \beta_4 \text{Exports}_i + \beta_5 \text{Sector}_i + \beta_6 \text{Region}_i + \epsilon_i
\]

The dependent variables are dummy variables indicating whether the manager of firm rates that area of the investment climate as a major or very severe obstacle or a dummy variable indicating that the firm manager rates that area of the investment climate as the biggest problem that they face. For the regressions with the dummy variable indicating a major or very severe obstacle, all obstacles are used in dependent variables. For the second case, where the dependent variable indicates that the firm said it was the biggest obstacle, only the areas that at least 5 percent of managers indicated were a serious problem are used as dependent variables. The reason for this is that when too few firm managers said it was the biggest problems, many of the independent variables predict the firm manager’s response. That is, in many of these cases, there is too little variation in the dependent variable for the model to be useful (i.e., the dummy variable is mostly zero).

The independent variables are a dummy variable indicating firm ownership (whether the firm has a female owner and whether the firm is foreign owned), firm size (number of workers), a dummy variable indicating whether the firm exports, and a series of dummies indicating sector of operations and regional location. The error term is assumed to be normally distributed. Because the dependent variable is a dummy variable, the model is estimated using standard maximum likelihood estimation.

**Results.** Results for whether the firm manager said areas related to infrastructure, other inputs, crime, and informality were serious problems are shown in Table A2.1. Results for whether the firm manager said areas related to taxes and regulation was serious problems are shown in Table A2.2. Results for whether the firm manager said it was the biggest problem are shown in Table A2.3

**Firm Size.** Managers of large firms were more likely to say that most areas of the investment climate were serious problems than small firms. The coefficient on number of workers is positive in all regressions except one (crime) and is statistically significant in seven out of 14 regressions.

Managers of large firms are especially likely to indicate that inadequately educated workers were a serious problem. Based upon the coefficients in Table A, increasing the number of workers from 11 to 16 workers would increase the likelihood that the manager said that inadequately educated workers was a serious problem by about 4 percentage points.

Managers of large firms were also significantly more likely to say that inadequately educated workers were the biggest problems they faced. Firms with 15 workers would be about 3 percentage points more likely to say that inadequately educated workers were the most serious constraint that they faced compared to similar firms with only 10 workers. Once again the difference is also clear looking at the raw data. About 46 percent of managers of medium-size and large firms reported that inadequately educated workers were the most serious problem that they faced compared to only 8 percent. Based upon this measure of perceptions, inadequately educated workers were the most serious concern for managers of large and medium-size firms. However, an inadequately educated workforce was only the third most serious concern for managers of small firms.

The coefficient on number of workers is also statistically significant in the regressions for tax rates, courts, trade regulation, labor regulation, business licensing, and corruption. Although corruption is not strictly a measure of regulation, many studies have found that corruption is strongly associated with arduous and inconsistent regulation.
Overall, this suggests that taxes and regulation might be a greater problem for large firms than for small firms. This could be the case if regulations and tax laws are more rigorously enforced for large firms.

Overall, these results suggest that the biggest difference between managers of small and large firms is that managers of large firms are far more likely to be concerned about inadequately educated workers than managers of small firms. Although they are also more concerned about taxation and regulation than managers of small firms, this does not generally affect the relative rankings. Most areas of regulation rank among the least concerns of managers of large and small firms, whereas tax rates are among the greatest concerns of managers of both large and small firms.

**Foreign-Owned Firms.** After controlling for size, sector and other things that might affect perceptions about the investment climate, there were few differences between managers of foreign and domestic firms with respect to perceptions about the investment climate. The coefficients on the foreign-owned dummies were not statistically significant in any of the regressions looking at the biggest obstacle to firm operations. However, they were only statistically significant in two of the fourteen areas of the investment climate that asked about regressions looking at serious obstacles to firm operations (tax rates and tax administration). The point estimates of the coefficients suggest that managers of foreign owned firms were 16 percentage points less likely to say that tax rates were a serious problem and were thirteen percentage points less likely to say that tax administration was a serious problem. Based upon the percent of managers that said each area was a significant problem, neither tax rates nor tax administration rank among the top three concerns of managers of foreign-owned firm (4th and 10th respectively). In comparison, they rank second and third respectively for managers of domestic firms.

**Female-Owned Firms.** Managers of female-owned firms did not generally have significantly different views about the investment climate than managers of firms with no female owners. The coefficient on the dummy indicating that the firm had some female owners was statistically insignificant in 11 of the 14 regressions where the dependent variable is whether the manager saw that area of the investment climate as a serious problem and in all of the regressions where the dependent variable is a dummy variable indicating that the manager said that area was the biggest problem that they faced.

The three areas of the investment climate that managers of female-owned firms were significantly less likely to say were serious problems were tax rates, tax administration, and access to land. The point estimates suggest that managers of female-owned firms were are 10 percentage points less likely to say that tax rates were a serious problem, nine percentage points less likely to say that tax administration was a serious problem, and 15 percentage points less likely to say that access to land was a serious problem. In practice, this does not appear to have a large effect on the relative rankings. Based upon the percent of managers that said each area was a significant problem, managers of female-owned firms ranked access to land, tax rates and tax administration as the first, second and fourth largest constraints respectively. In comparison, they ranked first, second, and third for firms with no female owners.

**Exporters.** A dummy variable indicating whether the firm exported any part of its output is also included in the base regression. Most of the firms that export any part of their output, export all of their output. Exporters also tend to be disproportionately in the garments and wood and furniture sub-sectors of manufacturing, and are larger and more likely to be foreign-owned than non-exporters are.

Even after controlling for these differences between exporters and non-exporters, exporters appear to be less likely to say that worker education was a serious problem than non-exporters. The point estimate of the coefficient suggests that exporters are about ten percentage points less likely to say that worker education is a serious problem. In this respect, exporters do not appear to be particularly dependent upon the availability of skilled workers. This is broadly consistent with firm performance analysis that suggests that exporters are less productive than non-exporters in the manufacturing sector. That is, exporters do not appear to be in particularly high productivity sub-sectors—potentially explaining both their lesser concern about worker skills and their relatively low productivity.

The other statistically significant difference between exporters and non-exporters is that exporters are more likely to say that access to finance is the biggest problem that they face than non-exporters are and less likely to say that access to land was the biggest problem that they faced. Although the coefficients in the regressions for access to land and access to finance have the same signs—also consistent with the idea that exporters have greater concerns in these areas.
**Sector of operations.** The regressions also include sector dummies indicating whether the firm is in manufacturing, retail or wholesale trade, or other services (mostly hotels and restaurants, construction, or transportation). The omitted category is manufacturing and so the coefficients indicate whether managers of retail trade and service firms have different perceptions from managers of manufacturing firms.

For the most part, the coefficients on these dummies are statistically insignificant. Statistically significant coefficients are, however, observed in the regressions for serious obstacles for tax rates (retail trade), competition with informal firms (retail trade), worker education (services) and for the biggest obstacle for tax rates (retail trade), worker education (retail trade) and electricity (retail trade).

The largest coefficients are in the regression for access to land. Managers of firms in the retail trade sector were 23 percentage points more likely to say that access to land was a serious problem than managers of manufacturing firms and firms in the service sector were 31 percentage points more likely to say so.

A more significant difference is that managers of firms in the service sector were about 23 percentage points more likely to say that worker education was a serious problem than managers of manufacturing and retail trade firms after controlling for other things. Consistent with this, before controlling for other differences, inadequately educated workers were not one of the top concerns of managers of manufacturing or retail trade firms. In contrast, more managers of other service firms said that inadequately educated workers were a serious problem than any areas other than tax rates and access to land.

Managers of retail trade firms, versus managers of other firms, were also significantly less likely to say that inadequately educated workers were the biggest problem that they faced.

Concern about inadequately workers was high in all sub-sectors of ‘other services’, but particularly high in the transport and construction industries. About 24 percent of hotel and restaurant managers said that inadequately educated workers were a serious problem; about 82 percent of managers of construction firms and 95 percent of managers of transportation firms said the same.

Managers of retail firms were more likely to say that competition with informal firms and tax rates were problems than managers of other firms and were more likely to say that tax rates were the biggest problem that they faced. After controlling for other things that might affect perceptions, managers of retail firms were about 12 percent more likely to say that competition with informal firms was a serious problem than managers of manufacturing firms and about 17 percentage points more likely to say that tax rates were a problem. It is important to note, however, that tax rates remain a concern for managers of all types. Other than access to land, managers of manufacturing and other service firms were more likely to say that tax rates were a serious problem than any other area of the investment climate. Similarly, competition with informal firms did not rank among the very top concerns even for managers of retail trade firms.

**Regions.** The regressions also include a set of regional dummies. The omitted dummy is for Vientiane meaning that the coefficients show the difference between the regions indicated and the dummy and Vientiane.

Several of the coefficients are statistically significant at a 10 percent level or higher. Firm managers in Luang Prabang are 15 percentage points less likely to say that electricity is a serious problem and firm managers in Savannakhet are 11 percentage points less likely to say the same. There are also some differences with respect to access to land - firm managers are 20 percent less likely to say that access to land is a serious problem in Savannakhet and 26 percentage points more likely to say that it is a problem in Champasack. There were also significant differences with respect to corruption, courts, trade regulation, tax rates, competition with informal firms, and access to finance.

In general, it was not clear that any of the provinces consistently out, or underperforms any other province. That is, firms do not appear to be particularly concerned or unconcerned in any of the four provinces. In most cases the dummy variables are statistically insignificant and have a mix of signs for each of the provinces. Although the statistically significant coefficients are all positive for Champasack (tax rates, trade regulation, corruption and access to land) and all negative for Luang Prabang (electricity, courts, and corruption), they indicate that managers are more likely to say these areas are problems in Champasack and less likely to say so in Luang Prabang than in Vientiane, most of the coefficients are statistically insignificant in both cases.
<table>
<thead>
<tr>
<th>Firm Characteristics</th>
<th>Electricity</th>
<th>Transport</th>
<th>Worker Education</th>
<th>Access to Finance</th>
<th>Access to Land</th>
<th>Crime</th>
<th>Competition with informal firms</th>
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<td>359</td>
<td>359</td>
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<td>318</td>
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<td>Firm Characteristics</td>
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<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Workers (Natural Log)</td>
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<td>0.024</td>
<td><strong>0.110</strong>*</td>
<td>0.006</td>
<td>0.028</td>
<td>-0.001</td>
<td>0.012</td>
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<td>(1.51)</td>
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<td>(1.07)</td>
<td>(-0.08)</td>
<td>(0.69)</td>
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</tr>
<tr>
<td>Foreign Owned (Dummy)</td>
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<td>-0.032</td>
<td>-0.075</td>
<td>0.021</td>
<td>0.027</td>
<td>0.081</td>
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<td>(-1.59)</td>
<td>(-0.52)</td>
<td>(-1.37)</td>
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<td>(0.52)</td>
<td>(1.45)</td>
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</tr>
<tr>
<td>Female-owned (Dummy)</td>
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<td>-0.011</td>
<td>-0.064</td>
<td>0.020</td>
<td><strong>-0.148</strong></td>
<td>0.021</td>
<td>-0.018</td>
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<td>(0.70)</td>
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<td>Retail Trade (Dummy)</td>
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<td>0.001</td>
<td>-0.004</td>
<td><strong>-0.097</strong></td>
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<td>(-1.74)</td>
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<td>(2.15)</td>
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<tr>
<td>Services (Dummy)</td>
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<td>0.018</td>
<td><strong>0.246</strong>*</td>
<td>0.013</td>
<td><strong>0.310</strong>*</td>
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<td>-0.061</td>
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<td>(3.39)</td>
<td>(0.21)</td>
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</tr>
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<td>Location (Vientiane is omitted)</td>
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<tr>
<td>Luang Prabang (Dummy)</td>
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<td>0.036</td>
<td>0.111</td>
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<td>-0.151</td>
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<td>(-0.21)</td>
<td>(-1.56)</td>
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<tr>
<td>Savannakhet (Dummy)</td>
<td><strong>-0.119</strong></td>
<td>-0.017</td>
<td>0.036</td>
<td><strong>-0.098</strong></td>
<td><strong>-0.200</strong>*</td>
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<td><strong>-0.084</strong></td>
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<td>(2.06)</td>
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<td>(-0.60)</td>
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<td>Champasack (Dummy)</td>
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<td>0.048</td>
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<td>-0.040</td>
<td><strong>0.260</strong>*</td>
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<td>-0.040</td>
</tr>
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<td>(0.76)</td>
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<td>(-0.61)</td>
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<td>0.0462</td>
<td>0.109</td>
<td>0.0278</td>
<td>0.0786</td>
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</table>

Source: Author’s Calculations based upon data from the World Bank’s Enterprise Survey for Lao PDR (2009)
Note: All regressions are probit regressions. Dependent variables are dummy variables with: 0 indicating no minor or moderate obstacle and 1 indicating major or very severe obstacle. The interview was in mid-2009. Coefficients are marginal effects for continuous variables and are the change in probability for dummy variables evaluated with all other variables set to zero.

***, **, * Statistically Significant at 1%, 5% and 10% significance Levels
### Table A2.2: Effect of firm characteristics on perceptions (taxes and regulation)

<table>
<thead>
<tr>
<th></th>
<th>Observations</th>
<th>Tax Rates</th>
<th>Tax Administration</th>
<th>Trade Regulation</th>
<th>Courts</th>
<th>Labor Regulation</th>
<th>Business Licensing</th>
<th>Corruption</th>
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<tr>
<td>Workers</td>
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<td>357</td>
<td>219</td>
<td>220</td>
<td>315</td>
<td>277</td>
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<tr>
<td>(Natural Log)</td>
<td></td>
<td>0.061**</td>
<td>0.010</td>
<td>0.026**</td>
<td>0.045*</td>
<td>0.012*</td>
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<td>(1.70)</td>
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<td>-0.000</td>
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<td>Female-owned</td>
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<td>-0.087*</td>
<td>-0.042</td>
<td>-0.097*</td>
<td>-0.018</td>
<td>-0.019</td>
<td>-0.014</td>
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<tr>
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</tr>
<tr>
<td>Retail Trade</td>
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<td>0.051</td>
<td>0.057</td>
<td>-0.019</td>
<td>-0.022</td>
<td>0.011</td>
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<tr>
<td>Luang Prabang</td>
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<td>Savannakhet</td>
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Note: See Table A2.1 for notes and sources
### Table A2.3: Effect of firm characteristics on perceptions about main obstacle

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<td><strong>Access to Finance</strong></td>
<td><strong>Tax Rates</strong></td>
<td><strong>Electricity</strong></td>
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<td>Firm Characteristics</td>
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<td></td>
</tr>
<tr>
<td>Workers</td>
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<td>0.048</td>
<td>-0.055</td>
<td>0.000</td>
</tr>
<tr>
<td>(Dummy)</td>
<td>(-0.34)</td>
<td>(-0.20)</td>
<td>(1.01)</td>
<td>(-1.01)</td>
<td>(0.01)</td>
</tr>
<tr>
<td>Exporter</td>
<td>-0.008</td>
<td>-0.063**</td>
<td>0.133**</td>
<td>-0.013</td>
<td>0.029</td>
</tr>
<tr>
<td>(Dummy)</td>
<td>(-0.16)</td>
<td>(-2.05)</td>
<td>(1.98)</td>
<td>(-0.18)</td>
<td>(1.17)</td>
</tr>
<tr>
<td>Sector (manufacturing is omitted)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retail Trade</td>
<td>-0.099*</td>
<td>-0.013</td>
<td>-0.093</td>
<td>0.138**</td>
<td>-0.056***</td>
</tr>
<tr>
<td>(Dummy)</td>
<td>(-1.88)</td>
<td>(-0.48)</td>
<td>(-1.57)</td>
<td>(2.02)</td>
<td>(-3.02)</td>
</tr>
<tr>
<td>Services</td>
<td>0.064</td>
<td>-0.003</td>
<td>0.029</td>
<td>-0.028</td>
<td>-0.015</td>
</tr>
<tr>
<td>(Dummy)</td>
<td>(1.23)</td>
<td>(-0.09)</td>
<td>(0.47)</td>
<td>(-0.38)</td>
<td>(-0.84)</td>
</tr>
<tr>
<td>Location (Vientiane is omitted)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Luang Prabang</td>
<td>0.075</td>
<td>-0.023</td>
<td>0.001</td>
<td>0.062</td>
<td>-0.003</td>
</tr>
<tr>
<td>(Dummy)</td>
<td>(1.16)</td>
<td>(-0.76)</td>
<td>(0.01)</td>
<td>(0.71)</td>
<td>(-0.11)</td>
</tr>
<tr>
<td>Savannakhet</td>
<td>-0.074</td>
<td>-0.018</td>
<td>-0.092*</td>
<td>0.244***</td>
<td>0.070**</td>
</tr>
<tr>
<td>(Dummy)</td>
<td>(-1.44)</td>
<td>(-0.68)</td>
<td>(-1.71)</td>
<td>(3.54)</td>
<td>(2.41)</td>
</tr>
<tr>
<td>Champasack</td>
<td>-0.011</td>
<td>-0.013</td>
<td>-0.156**</td>
<td>0.194**</td>
<td>0.031</td>
</tr>
<tr>
<td>(Dummy)</td>
<td>(-0.17)</td>
<td>(-0.39)</td>
<td>(-2.54)</td>
<td>(2.26)</td>
<td>(1.02)</td>
</tr>
<tr>
<td>Pseudo R-Squared</td>
<td>0.181</td>
<td>0.0481</td>
<td>0.0556</td>
<td>0.150</td>
<td>0.191</td>
</tr>
</tbody>
</table>

Source: Author’s Calculations based upon data from the World Bank’s Enterprise Survey for Lao PDR (2009)

Note: All regressions are probit regressions. Dependent variables are dummy variables with 1 indicating the biggest obstacle. Coefficients are Marginal effects for continuous variables and are the change in probability for dummy variables evaluated with all other variables set to zero.

***, **, * Statistically Significant at 1%, 5% and 10% significance Levels
ANNEX 3: ECONOMETRIC ANALYSIS - DIFFERENCES BETWEEN PERCEPTIONS IN 2005 AND 2009

The 2009 Enterprise Survey was the second Enterprise Survey conducted in Lao PDR. An earlier survey was conducted in 2005. As discussed below, the coverage of the two surveys was slightly different, making comparisons between the two surveys in terms of perceptions and other variables difficult. One difference was that the 2009 survey had more comprehensive coverage covering manufacturing, retail trade and other services. In contrast, the 2005 survey covered manufacturing and tourism. Because of the different sector coverage comparisons between the 2005 and 2009 surveys, comparisons are restricted to manufacturing. As discussed below, even when the samples are restricted to manufacturing, some differences between the two samples remain, making comparisons difficult.

Regional Coverage. In addition to the differences in sector coverage, one additional difference between the two surveys is that the 2005 survey had slightly wider regional coverage than the 2009 survey. The 2005 survey covered six provinces: Vientiane; Oudomxay; Luang Prabang; Xayaboury; Savannakhet; and Champasack. In contrast, the 2009 survey covered only four regions: Vientiane, Luang Prabang, Xayaboury, and Savannakhet. Because of the differences in coverage, comparisons between the two surveys are restricted to the four provinces covered in both surveys. This should make comparisons between the two easier.

Once firms from the provinces that were surveyed in 2005 but not in 2009 are excluded, the two samples are fairly similar in terms of coverage when weights are not applied. In both cases, Vientiane accounts for about 57-58 percent of the sample. Once the firms in the two provinces not surveyed in 2009 are excluded, firms in Luang Prabang and Champasack account for smaller shares of the sample firms in 2005 (4 and 9 percent in 2005 respectively compared to 11 and 12 percent in 2009). Similarly, Savannakhet accounts for a larger share of the sample in 2005 (28 percent) than in 2009 (19 percent). The differences, however, are more significant when weights are applied.

Sectors. There are significant differences in terms of sector coverage (see table A3.1). The 2005 sample was made up mostly of firms in the garments (18 percent), food and beverage (15 percent), and wood and furniture (32 percent) sectors. There were also a significant number of firms in the textile sector (9 percent). Although the first three sectors were also heavily represented in the 2009 sample, the weighted 2009 sample contained far more food and beverage firms (35 percent) and far fewer firms in the wood and furniture sector (14 percent). There were also fewer textile firms (3 percent).

Size and other enterprise characteristics. In addition to the differences in terms of sector and location, there are also some significant differences in terms of firm size (Table A3.2). Firms in the 2005 sample are larger than firms in the 2009 sample. The median firm in terms of size in the 2005 sample had 25 workers, compared to 11 workers in the 2009 sample.

### Table A3.1: Sector distribution in 2005 and 2009

<table>
<thead>
<tr>
<th>Sector</th>
<th>2005</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textiles</td>
<td>9%</td>
<td>3%</td>
</tr>
<tr>
<td>Garments</td>
<td>18%</td>
<td>20%</td>
</tr>
<tr>
<td>Food and Beverage</td>
<td>15%</td>
<td>35%</td>
</tr>
<tr>
<td>Wood and Furniture</td>
<td>32%</td>
<td>14%</td>
</tr>
<tr>
<td>Other Manufacturing</td>
<td>26%</td>
<td>29%</td>
</tr>
</tbody>
</table>

Source: World Bank Enterprise Survey

### Table A3.2: Size distribution of sample in 2005 and 2009

<table>
<thead>
<tr>
<th>Size Category</th>
<th>2005</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median Size</td>
<td>25</td>
<td>11</td>
</tr>
<tr>
<td>Very Small (5-9 workers)</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td>Small (10-49 workers)</td>
<td>40</td>
<td>48</td>
</tr>
<tr>
<td>Medium (50-99 workers)</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>Large (100 and up)</td>
<td>25</td>
<td>7</td>
</tr>
<tr>
<td>Exports</td>
<td>44%</td>
<td>21%</td>
</tr>
<tr>
<td>Foreign-owned</td>
<td>20%</td>
<td>6%</td>
</tr>
</tbody>
</table>

Source: World Bank Enterprise Survey
There are also other differences between the two samples. One notable difference is that the 2005 sample contains far more exporters and foreign-owned firms than the 2009 sample after applying weights. In the 2005 sample, about 44 percent of the firms were involved in exporting and about 20 percent were foreign-owned. In comparison, only about 21 percent of the samples in 2009 were exporters and only about 6 percent were foreign-owned.

**Differences in the questionnaire.** The questionnaires also differed between the two surveys. Several potential obstacles were dropped from the 2009 survey [regulatory policy uncertainty, health of workers, telecommunications (for manufacturing firms), and cost of financing] and one obstacle was added (political instability). In addition, several similar obstacles that were on both surveys were different. The biggest difference is access to finance. In the 2009 survey, access to finance is said explicitly to include ‘availability and cost’ whereas in the 2005 survey there is a separate obstacle for ‘cost of financing’. The other changes where obstacles refer to similar concepts but are asked about differently include: skills and education of available workers (2005) and inadequately educated workers (2009); legal system/concept resolution (2005) and courts (2009); and anti-competitive or informal practices (2005) and practices of competitors in the informal sector (2009).

To control for the first difference, we focus on the 14 obstacles that were asked about in both surveys. For the ranking analysis, firms that ranked an area not included in one of the surveys as the biggest constraint, we re-rank based upon the area that was ranked the second biggest constraint. So, for example, if a manager said that ‘telecommunications’ was the biggest problem that he faced in 2005, we would code the variable to be the area he ranked as the second biggest constraint (e.g., electricity) for this variable. If the second biggest area was also an area not asked about on the other survey, we would move to the third biggest constraint.

**Econometric Analysis.** To answer the question about whether perceptions changed much between 2005 and 2009, it is necessary to control for observable differences between the two samples. Restricting the sample to manufacturing firms in both samples will partially resolve this. However, as noted above, additional differences between the samples remain even after doing this. To partly control for the remaining differences, we regress measures of perceptions on enterprise characteristics and a year dummy indicating whether the observation is for 2005 and 2009. If the coefficient on the year dummy is statistically significant, this suggests that observable differences between the two samples do not fully explain differences in perceptions between 2005 and 2009. The analysis for the main obstacle is limited to obstacles that significant numbers of firms.

The methodology used in this section is similar to the methodology used in the previous appendix and in a recent paper by Gelb, Ramachandran, Shah and Turner (2006). The question of how different factors, including ownership, affect access to credit for microenterprises is examined by estimating different versions of the equation below:

\[
\text{Perception about IC}_i = \partial \text{Year} + B_1 \text{Woneship}_i + B_2 \text{Size}_i + B_3 \text{Exsporter}_i + B_4 \text{Sector}_i + B_5 \text{Region}_i + \epsilon_i
\]

The main variable of interest in this section is the year dummy for 2005 — if the coefficient is positive, this suggests that firm managers in 2005 saw that area as a greater problem than firm managers in 2009 even after controlling for other differences. The comparisons are made for the top five obstacles in each year. Since there was overlap between the top obstacles in the two surveys, this effectively means that we have to look at worker education (2009); access to land (2009); access to finance (both); tax rates (both); electricity (both); transport (2005); and trade regulations (2005).

**Results.** The coefficient on the year dummy is statistically significant for five of the seven regressions (Table A3.3). Firm managers in 2005 were about 25 percent more likely to say that electricity was a serious problem and about 5 percent more likely to say that transportation was a serious problem than firm managers in 2009 even after controlling for other differences. In this respect, there is good evidence that managers were more concerned about infrastructure in 2005 than in 2009. Consistent with this, although telecommunications was not asked about in the 2009 sample for manufacturing, it is also rated among the top concerns in the 2005 sample.
The reverse was true for the other top constraints such as worker education, access to finance and tax rates. Although these ranked among the top constraints in both surveys, firm managers were far less likely to say they were the biggest problem that they faced in 2005 (by 14 percent, 15 percent and 7 percent respectively). Overall, the evidence suggests that infrastructure was a far less significant concern in 2009 than in 2005, as firm managers were far less likely to say it was a problem in 2009 than in 2005.

| Table A3.3: Differences in perceptions about main obstacle for managers in 2005 and 2009 |
|-----------------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                                                | Worker Education | Access to Land   | Access to Finance | Tax Rates       | Electricity     | Transport       | Trade Regulations |
| Observations                                  | 345             | 322             | 345              | 345             | 345             | 345             | 322             |
| Year Dummy                                    | -               | 0.007           | -                | -               | 0.254**         | 0.053*          | 0.043           |
| Year - 2005 (dummy)                           | 0.144***        | (3.62)          | 0.152***         | (5.29)          | (1.79)          | (1.37)          |
| Firm Characteristics                          |                 |                 |                  |                 |                 |                 |                 |
| Workers                                       | 0.035**         | -0.015          | 0.010            | -0.022          | -0.038*         | -0.018          | -0.008          |
| (Natural Log)                                 | (2.11)          | (-1.46)         | (0.61)           | (-1.15)         | (-1.78)         | (-1.29)         | (-0.57)         |
| Foreign Owned                                 | -0.043          | 0.059*          | -0.088**         | 0.046           | -0.020          | -0.004          | -0.044          |
| (Dummy)                                       | (-0.98)         | (1.75)          | (-2.01)          | (0.85)          | (-0.32)         | (-0.11)         | (-1.14)         |
| Female-owned                                  | -0.016          | -0.076*         | -0.007           | -0.007          | -0.039          | -0.024          |
| (Dummy)                                       | 0.055**         | 0.079           |
| Exporter                                      | 0.003           | -0.036          | 0.060            | -0.067          | 0.017           | 0.038           | 0.000           |
| (Dummy)                                       | (0.07)          | (-1.41)         | (1.37)           | (-1.45)         | (0.32)          | (1.14)          | (0.01)          |
| Location (Vientiane is omitted)               |                 |                 |                  |                 |                 |                 |                 |
| Luang Prabang                                 | 0.032           | -0.018          | -0.055           | 0.127           | 0.060           |
| (Dummy)                                       | (0.41)          | (-0.26)         | (-0.76)          | (1.29)          | (0.92)          |
| Savannakhet                                   | -0.035          | -0.020          | -0.117**         | 0.098*          | -0.025          | 0.025           | -0.004          |
| (Dummy)                                       | (-0.79)         | (-0.92)         | (-2.57)          | (1.95)          | (-0.47)         | (0.70)          | (-0.11)         |
| Champasack                                    | -0.056          | -0.023          | -0.059           | -0.008          | 0.216**         | 0.035           | -0.014          |
| (Dummy)                                       | (-0.85)         | (-0.76)         | (-0.98)          | (-0.11)         | (2.49)          | (0.64)          | (-0.29)         |
| Pseudo R-Squared                              | 0.11            | 0.10            | 0.11             | 0.07            | 0.14            | 0.05            | 0.03            |

Source: Author’s Calculations based upon data from the World Bank’s Enterprise Survey for Lao PDR (2009 and 2005)

Note: All regressions are probit regressions. Dependent variables are dummy variables with 1 indicating that the biggest obstacle. Coefficients are Marginal effects for continuous variables and are the change in probability for dummy variables evaluated with all other variables set to zero.

***, **, * Statistically Significant at 1%, 5% and 10% significance Levels

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1 In reference to training modalities: 6,000 from the “12 + 2” and another 4,000 from the “12 + 3” systems.
2 This statistic reflects the high share of urban enterprises in the survey. A recent survey by ADB (2004) “Rural Finance in the Lao PDR: Demand, Supply and Sustainability” finds that only 10 percent of rural households, and hence entrepreneurs, have bank accounts.
3 Currently banks are reluctant to accept movable assets as collateral as Lao PDR still lacks both the legal framework and supporting infrastructure for enforcement (registry of movable assets).
4 According to the Doing Business Report, it takes 100 days to register a property, with 7 different steps required to fulfill the procedure.
5 Lao PDR Trade Facilitation Performance, Trade Development Briefing Note, Issue 2, January 2010.
6 The Doing Business Indicators report that it takes 7 steps and 100 days to obtain a license in Lao PDR.
7 Full data as well as detailed description of the survey methodology, including sampling method and questionnaire can be downloaded from http://www.enterprisesurveys.org/methodology/.