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Implications of WTO Accession for Selected Domestic Industries of Laos

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Implications of WTO Accession for Selected Domestic Industries of Laos

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**Presented to
Ministry of Industry and Commerce
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Lao PDR**

**Capacity Building and Technical Support to Laos
in the World Trade Organization Accession Negotiation**

2010



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List of Abbreviations

AFTA	ASEAN Free Trade Area
AHTN	ASEAN Harmonized Tariff Nomenclature
APTA	Asia Pacific Trade Agreement
ASCM	Agreement on Subsidies and Countervailing Measures
c.i.f.	Cost, insurance and freight
CEPT	Common Effective Preferential Tariff
CGE	Computable general equilibrium
CTE	Consumer tax equivalent
EBA	Everything But Arms
ERP	Effective rate of protection
FDI	Foreign direct investment
FTA	Free trade area
GATT	General Agreement on Tariffs and Trade
GMS	Greater Mekong Subregion
HS	Harmonized Commodity Description and Coding System
LBC	Lao Brewery Company
LDC	Least-developed country
MFN	Most Favored Nation
MOIC	Ministry of Industry and Commerce
NERI	
NRA	Nominal rate of assistance
NRP	Nominal rate of protection
NTB	Non-tariff barriers
NTR	Normal trade relations
PPP	Purchasing Power Parity
R&D	Research and development
REER	Real effective exchange rate
SMEs	Small and medium size enterprises
SOE	State-owned-enterprise
TEs	Tariff equivalents
TRIMs	Trade-Related Investment Measures
VAT	Value added tax
VSI	Vientiane Steel Industry
WTO	World Trade Organization



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Executive Summary

The Government has identified key priority industries like cement and steel bars that are to be promoted under its Strategy on Industrialization and Modernization (2001-2020). Others like beer constitute end-user industries that have successfully name-brand recognition. The importance of those industries to the economy is significant in terms of output, employment and linkages to other downstream and/or upstream activities. Cement and beer each contribute 10 percent to the total value of industrial activity, and steel constitutes over 3 percent of the total. The three industries together employ 2,400 persons. Within the construction industry, cement and steel account for nearly one-third of value added, which itself represents a third of the country's total industrial production. In promoting the industries, the Government must ensure compliance with WTO rules as part of its accession negotiations. To this end, the present study examines the implications of Lao PDR's WTO accessions on the domestic cement, steel bar and brewery industries with a view to developing recommendations on how to concurrently manage the Government's domestic strategic objectives with the country's effective involvement in the global economy.

1. Industry Competitiveness and Growth Potential

The competitiveness of the cement and steel industries and, to a somewhat lesser extent, that of the brewery industry have been undermined by a policy regime that imposes considerable barriers to trade and investment, relatively high costs of doing business, and exchange rate policies that effectively raise domestic costs relative to those of foreign-sourced products.

Institutional Effectiveness – Apart from resource misallocation caused by non-tariff measures in the cement and steel bar industries, the institutional capabilities of the public sector needed to effectively promote the industries are low by international standards. Notwithstanding recent improvements, Lao PDR's ranking on government effectiveness remains among the lowest in the region, according to the World Bank's latest ratings.

Business Practices – In business practices, Lao PDR's ranking is moderate in terms of employing workers, tax payments and contract enforcement, but it is low in terms of trading across borders, obtaining permits, property registration, credit facilities, and operating a business. Lack of access to capital remains one of the most severe constraints on businesses operating in the country.

Real Cross-Rates – The real effective exchange rate of the kip has appreciated in recent years relative to the major foreign competitors of the country's beer, cement and steel bar producers. This trend has further undermined the cost differential between domestically produced goods and that of competing suppliers from neighboring countries. Because consumers are responsive to relative price differences between Laotian and foreign suppliers, the demand for domestically produced goods has weakened in recent years. Despite a recent beer market survey suggesting that consumer preferences for domestic beer are little affected by price variations in the short run, a continued erosion of prices differentials over longer periods of time would undermine the competitiveness of the brewery industry. Similarly, further appreciations of the kip would erode the competitiveness of the cement and steel bar industries.



Growth Potential of Industries – Lao PDR's growth potential for steel bars and cement is likely to be limited to its domestic market in the medium to long term, while beer has a significant potential for exports.

- In beer, per capita consumption in Laos is currently about one-half of the average for the lower quartile of countries that consume alcoholic beverages. Assuming that domestic producers are able to maintain their current market shares, the industry could double its existing production level over the medium to long run. For exports, the forecast is for an annual expansion of 7 percent.
- In cement, current per capita consumption in Laos is somewhat over one-half of that in Thailand and China. Over the medium to long run, domestic consumption could expand by as much as 90 percent over its present level and, if the economy were to become self-sufficient in that sector, production could expand by three times its current level.
- In steel, per capita consumption in Laos is only one-seventh of the world average. Total consumption has the potential to grow by six times its current level, and domestic production only accounts for less than one-fifth of existing utilization in the economy. The potential for the industry is therefore considerable, were it to become competitive and capable of substituting foreign imports.

2. Non-Tariff Measures

WTO Context – In negotiating its accession, Laos will be limited in its capacity to promote and protect domestic industries. A key guiding principle of WTO is that protection of domestic industries should be limited to tariff measures and that non-tariff barriers like quantitative and qualitative controls be eliminated or converted to tariffs. These requirements are nonetheless subject to exceptions related to balance of payments difficulties, safeguards and other rules. For least developed countries (LDCs) like Laos, transitional periods and arrangements are provided to enable acceding LDCs to effectively implement commitments and obligations. However, those transitional arrangements need to be eliminated within a time period specified at the time of the country's accession.

Types of Trade Controls –The Government currently imposes three types of control measures for cement and steel bar imports. To control the volume of imports, it applies import licensing restrictions and quantitative controls on the importation of steel bars for construction and all types of cement. To control prices, it applies a maximum price on domestically produced cement and steel bars. While the price differentials between domestic and foreign supplies are generally stable, exceptions occur when there are sharp market price variations. In those cases, administered price adjustments can lag behind market prices by several months, causing market distortions and inefficiencies in the allocation of resources. Additionally, under the WTO Agreement on Import Licensing Procedures, existing controls are under review since they can only be applied when other mechanisms are unable to provide the same results.

Ad Valorem Tariff Equivalents – Measurement of the ad valorem tariff equivalent of non-tariff measures involve calculating the so-called price wedge between the border price equivalent of a product and its domestic price equivalent, net of the tariff. In practice the c.i.f. price plus customs charges and other costs measured in local currency are used to determine the border price equivalent, which is then compared with the domestic wholesale price to calculate the price wedge. The calculated ad valorem tariff equivalent of NTBs in cement is nearly 11 percent and that for steel bars is 12 percent. Overall, in cement the non-tariff measures account for about two-thirds of the total ad valorem tariff equivalent of both tariffs and NTBs to trade, and tariffs account for the remaining one-third. In steel, the non-tariff measures account for about 70 of the total ad valorem tariff equivalent of both tariffs and NTBs to trade, and tariffs account for the remaining 30 percent.



3. Tariff Measures

MFN Rates - The most-favored-nation (MFN) tariff structure of Laos has been simplified to six tariff rates of 5, 10, 15, 20, 30 and 40 percent, and their unweighted average equals 11 percent. Half of the tariff lines have a 5 percent rate, almost one-third have a 10 percent rate, nearly one-tenth percent have a 20 percent rate, and the remaining lines have a 30 or 40 percent rate. Beer enjoy higher tariff protection (40%), while cement and steel have low duty rates (5%) but receive protection in the form of non-tariff measures. Most other ASEAN member countries also levy a high tariff on alcoholic beverage imports. Vietnam and Thailand, for example, apply a duty rate of 60 percent, while Indonesia applies the same 40 percent duty rate as Laos. In cement, three ASEAN member countries protect their industries with higher tariff rates than Laos, most notably Vietnam, which levies a 38 percent tariff on its imports of cement. Similarly, in steel three ASEAN countries have significantly higher tariffs than Laos, while Cambodia's tariff is modestly higher than that of Laos

Other Taxes – Excise taxes range from 5 to 90 percent and a 50 percent rate is applied to alcoholic beverages. That tax does not distinguish between imported and domestically produced goods. A turnover tax based on Tax Law No. 04/NA of 19 February 2005 constitutes a general indirect tax on the consumption of goods and services, levied at a rate of 5 or 10 percent, which is collected on imports at customs checkpoints and from wholesalers. A value added tax (VAT) will replace the turnover tax, probably in 2010.

CEPT-AFTA Rates – As a member of the ASEAN Free Trade Area (AFTA), Lao PDR began implementation of the AFTA Common Effective Preferential Tariff (CEPT) scheme in 1998, and in January 2008 it completed a major milestone in the liberalization schedule by reducing import duties on 95 percent of products from ASEAN countries to between 0 and 5 percent. Beer is subject to a CEPT rate of 40 percent until 2013, 20 percent in 2014, and zero thereafter. Cement is subject to a 5 percent rate until 2014 and zero thereafter. Steel bars have a CEPT rate of zero percent, effective since 2008. The degree of protection of ASEAN member countries within the CEPT scheme is considerably lower. In beer, only Indonesia retained the same high tariff rate as Laos, while Brunei and Malaysia have included that product in their General Exception list.

Tariffs on Inputs – The ability to compete both in domestic and international markets is partly attributable to production costs, and those costs can be undermined by tariffs on material inputs to domestic industries. An assessment of the import tax burden based on the production cost coefficients on those tradable goods reveals a considerable cost burden through the region: in Laos the cost-of-production weighted average tariff on material inputs for cement is 7.3 percent, while it is 8.5 percent in Cambodia, 7.7 percent in Vietnam and 7.3 percent in Malaysia. In steel, the opposite pattern exists: the cost-of-production weighted average duty rates on the material inputs are lower than the unweighted average in Cambodia (5.2% weighted average versus 6.1 unweighted average) and Malaysia (4% weighted average versus 7.3% unweighted average). Only in Laos is the nominal rate of protection (NPR) of 5 percent on the industry output the same as the NPR for material inputs. Additionally, the existence of tariffs on tradable inputs that are also used in export-oriented industries can create an anti-export bias. Those industries attempting to export rather than sell in the domestic market receive no output tariff protection but must nevertheless pay the protected input costs of tradable inputs. While duties on inputs could be offset by a duty-drawback scheme, no such system exists in Laos.

Effective Rates of Protection (ERP) – Although the ERPs for cement and steel bars suggest that the amount of protection has been fairly neutral for both industries, the more interesting question is how that protection compares with that given by other countries to those same



industries. In the case of cement, three countries have significantly higher ERPs than Laos. Vietnam in particular protects its cement industry to a far greater degree than Cambodia and Thailand, though the latter two countries have higher rates of protection in the industry than Laos. In the case of steel, five countries protect their industries to a significantly greater extent than Laos. Malaysia, in particular, has a much higher degree of protection than the other countries, though Vietnam, Indonesia, Cambodia and Thailand all protect their industries more than Laos. However, it is important to emphasize that these results refer to the protection given to the industries through tariffs and exclude the non-tariff measures applied by Laos.

4. Total Protection to Industries

Table S.1 summarizes the ad valorem tariff equivalents (TEs) of the selected industries. Under the present regime, beer receives the highest level of protection (110%), followed by steel bars (17%) and cement (16%). The actual level of effective rate of protection (ERP) with the existing tariffs and TEs of the non-tariff measures is 62 percent for cement and 50 percent for steel bars. Lowering the existing tariffs to zero on tradable inputs in the cement and steel bar industries would increase the ERP on those industries to 84 percent for cement and 67 percent for steel bars. It would also create greater transparency, streamline administrative and bureaucratic procedures, and facilitate business practices in the country.

Table S.1: Tariffs and Ad Valorem Tariff Equivalent of NTBs in Selected Industries, Applied to ERP Estimates

		Beer	Cement	Steel Bars
Tariff		40%	5%	5%
Excise Tax		50%	0%	0%
Tariff + Excise Tax 1/		110%	5%	5%
Non-tariff barriers to trade		0%	11%	12%
Total Ad Valorem Tariff Equivalent		110%	16%	17%
Effective Rates of Protection Ad Valorem Tariffs Equivalents of NTBs	With Existing Duties on Tradable Inputs	na	62%	50%
	With Zero Duties on Tradable Inputs	na	84%	67%

1/ Calculated as $t + (1+t)e$, where t =tariff and e =excise tax.

5. Impact of Alternative Reform Strategies

As part of the WTO negotiations, Lao PDR is likely to undertake specific reforms of its trade regime covering tariff and non-tariff measures impacting on the selected industries covered by this study. We have examined the transformation of non-tariff measures to ad valorem tariff equivalents, and assessed the impact of alternative tariff reform strategies on the beer, cement and steel bar industries in terms of various performance indicators, including those related to the industry, government tax revenue, and employment effects. Table S.2 summarizes the results.

Impact on Effective Rates of Protection – With a multi-tiered system that applies the actual tariff plus tariff equivalent (TE) of NTBs with zero duties on tradable inputs, the ERP for cement would increase from its existing level of 62 percent to 84 percent; for steel bars it would increase from 50 percent to 67 percent. In contrast, the use of a uniform tariff that applied the same tariffs plus TEs to both outputs and inputs would lower the ERPs to 46 percent for cement and 23 percent for steel bars. Even though the tariffs on inputs and outputs are the same under a uniform tariff, the ERP is positive since input tariffs only cover a portion of total production costs, the remaining costs being attributable to non-tradables. The implication of these findings is that protection of the cement and steel bar industries is more effective under a multi-tier system in which tariffs on tradable inputs are eliminated and the ad valorem equivalent tariff is applied to existing non-tariff measures.

Impact on Production and Employment – A uniform tariff equal to the existing tariff and ad valorem tariff equivalents of NTBs applied across the board to both inputs and outputs would increase production by 9 percent, whereas a multi-tiered tariff system with the same tariff



equivalents on outputs but a zero tariff on inputs would increase output by 17 percent. The reason for this difference is that output price rises would increase the quantity supplied by that same amount without inducing any shifts in supply caused by a cost increase. For the portion of beer that is exported, a graduated tariff system would not have any effect on exports since the producer would not receive protection in the output market, that is, the international market, while input prices would be free of duties in the proposed scheme. In the case of a uniform tariff, however, the increased input prices would have a negative effect on production and output would contract significantly. Since fixed factor input coefficients are assumed to exist in the short to medium term in all three industries, changes employment levels associated with these reforms would be proportional to the estimates changes in production volumes.

Table S.2: Effect of Alternative Tariff Reform Strategies

	Beer		Cement		Steel Bars	
	Tariff Escalation ^{2/}	Uniform Tariff	Tariff Escalation	Uniform Tariff	Tariff Escalation	Uniform Tariff
NRP on Outputs	110%	110%	18%	18%	15%	15%
NRP on Inputs	0%	110%	0%	18%	0%	15%
Effective Rate of Protection ^{1/}	na	na	101%	55%	59%	20%
Change in Imports (from free trade) ^{2/}	-26%	-13%	-11%	-8%	-12%	-5%
Government Revenue from NTB Tariffication ^{3/}	na		10%		12%	
Total Government Revenue Effect ^{4/}	110%		16%		17%	
Production Volume Adjustments	26%	13%	11%	8%	12%	5%
Employment Effect	26%	13%	11%	8%	12%	5%

1/ Assumes that non-tariff measures are converted to tariff equivalents

2/ Applies existing tariff and tariff equivalents of NTBs.

3/ Additional government revenue relative to total value of imports with ad valorem tariff equivalent.

4/ Total government revenue relative to total value of imports with ad valorem tariff equivalent.

Impact on Government Revenue – Existing duty and excise taxes on beer generate about US\$1.4 million in revenue, while the duty on cement and steel bar imports provides over US\$5.0 million in revenue. The conversion of non-tariff measures to ad valorem tariffs would add another 11 and 12 percentage points to the duty rates on cement and steel bars. Trade tax revenue would not, however, rise by that full amount since the increase in trade taxes would reduce the volume of cement and steel rods imported. Although trade taxes would not increase by the same proportion as the rise in duty rates, they would nonetheless produce an additional US\$10.8 million in revenue. The conversion of non-tariff measures would also reduce the administrative costs of managing those non-tariff measures and free government officials to engage in other activities.

6. Conclusions

Arguments for Protecting Selected Industries – Protection of the construction industry and, in large part, that of the brewery industry is largely based on the need for Laos to catch up in its transition to a market economy and therefore provide infant-industry protection to those industries. That adjustment process has been envisioned under the WTO as it relates to LDCs and justifies protection during limited, time-bound period for certain industries. It recognizes that trade protection can affect the performance of domestic firms by influencing the competitive pressures that these firms face and the size of the market in which they operate. Article XVIII provides for wide ranging government actions to help protect and encourage infant industries, subject to consultation and notification of WTO members.

Arguments for Liberalizing Selected Industries – Continued protection of inefficient industries prevents Laos from exploiting its comparative advantage in labor and resource-intensive manufactures since it leads to movement of resources away from such activities. Moreover, the presence of trade distortions causes investment to focus on non-competitive activities, leading to a decline in returns to investment over time and compromising future output growth. There is



already evidence that private investment is being attracted to non-tradable, mainly in services, rather than the tradable sectors. Finally, interest groups that have invested in activities that are not internationally competitive will resist reforms, creating a lobby against future reforms because the value of their invested capital would decline with greater external competition.

The presence of high escalation in tariffs and tariff equivalents on non-tariff measures also discourage the growth of input producing industries. Laos already has a comparative advantage in a number of input-producing activities and, when tariff escalation discriminates against these activities, entrepreneurs will favor more protected downstream activities that may not have comparative advantages. Industrial development among successful developing countries has followed a pattern of movement from raw material and intermediate good production to the production of final goods, and tariff escalation can undermine efforts of countries like Laos to successfully industrialize.

7. Recommendations

Guiding Principles - An optimal trade policy regime is predictable, transparent and administered in a way that consumers, producers and investors can rely on market signals provided by prices that bear some established relationship to the trade regime. As such, tariffs are the best known transparent instrument of protection. They provide administrative predictability and transparency, and they offer an easy way to accomplish tariff reductions that signals to economic agents that the country is on the path to a market-based economy. For those reasons, it would be preferable to eliminate existing non-tariff measures that promote inefficiencies and rent-seeking and adopt a system based solely on tariffs as the instrument of protection. Excise and consumer taxes are consistent with a predictable and transparent system since they do not discriminate between foreign and domestic goods.

Lessons Learned from Other ASEAN Countries – The lessons learned from the other ASEAN countries, especially the recent experiences of Cambodia, also an LDC, and Vietnam, are that protection can be effectively applied to some industries, especially those that are in infant stages of development, and that the most effective instrument for that type of protection is provided by tariffs. The reason is that tariff measures are less likely to lead to rent seeking and costly administrative practices, and they limit the exercise of possible domestic monopoly power. By making tariffs the centerpiece of trade policy, the ASEAN countries have brought their economic policies in line with WTO practices in which tariffs are, with very few exceptions, the only acceptable tool for protection. These trade policy adjustments have been conditional on parallel domestic policy reforms, and together they have provided the means by which those ASEAN countries have effectively integrated their economies into the global trading system.

Transforming Non-Tariff Measures into Tariffs – The Government's use of non-tariff measures in the cement and steel bar industries is based on its desire to promote them both as infant and strategic industries. However, those types of measures create inefficiencies, and they lack transparency and predictability. In Lao PDR's accession negotiations it is likely that members will stress the need for Laos to abide by WTO's transparency obligations, as contained in GATT Article X. Likewise, the predictability principle can be ensured by providing preferences to tariffs over less transparent and less secure non-tariff measures such as quotas and licenses. Only regimes based on tariffs can ensure that the variance in protection is kept within observable limits.

Tariffs on Beer – The existing nominal rate of protection (NRP) of 110 percent for the domestic brewer industry is considerably higher than the level of protection given to the domestic beer industries of other ASEAN countries. On average the tariff rate of other ASEAN countries is about 40 percent. Moreover, CEPT-AFTA rates are much lower in other countries, averaging



only 11 percent compared with the 40 percent rate of Laos. Nevertheless, Laos is committed to reducing its CEPT-AFTA rate on beer to zero percent by 2015. There is therefore considerable scope for also reducing the MFN rate to a level that would be more in line with other ASEAN countries over the next few years.

Making the Industry More Competitive following WTO Accession – Lao PDR’s transition to a market economy along with its accession to the WTO will place increasing pressures on the brewery and construction industries to enhance their competitiveness without having to rely on protection and subsidies. While infant industry protective measures can be used to help that transition process, the country’s Action Plan submitted to the WTO will necessarily include a timeline for the elimination of WTO- inconsistent measures. That timeline increases the importance of introducing effective measures to support and facilitate the transition of these industries to maturity or enhanced those that already exist. Industry-specific adjustments directly affecting the industry’s production costs include:

- ✓ Skills development through sustainable business development services that promote the use of advanced technologies and modern management techniques.
- ✓ Expanded use of upstream activities within the country to lower the costs of sourcing supplies from neighboring countries.
- ✓ Greater use of networking facilities and clusters to upgrade suppliers and supporting services.
- ✓ Continued dissemination of modern production facilities and environmentally friendly production technologies.
- ✓ Improvements in transportation and logistics to reduce costs of raw material sourcing and distribution to domestic markets.
- ✓ Improved access to credit at competitive rates or soft loans from commercial and development banks.

Equally important are economy-wide reforms that affect the costs of domestic business activity and thereby directly impact on the ability of the industries to compete with foreign suppliers, especially:

- ✓ Introducing the specific trade reforms enumerated below aimed at reducing market distortions while concurrently supporting the industries targeted by the government’s industrialization program.
- ✓ Reducing the cost of doing business in the areas identified as having low rankings in the country relative to those of neighboring countries that represent important competitors for the target industries.
- ✓ Reviewing exchange rate policies affecting the country’s competitiveness with neighboring countries, particularly in the light of changes in the management of currencies taking place in Asian countries during the rebalancing of the global economy.

Potential Trade Reforms – The contrast between the present trade regime and alternative regimes suggests a remaining agenda for reforms. Such an agenda is not too difficult to identify and could include the following elements.

- ✓ Initially convert existing non-tariff measures in cement to an ad valorem tariff equivalent of 11 percent and convert those in steel bars to an ad valorem tariff of 12 percent to make tariffs the only instrument of protection, increase transparency, enhance government revenue and reduce administrative costs in the public sector.



- ✓ Over time, gradually reduce the overall tariff level on beer to bring it in line with CEPT-AFTA rates by 2015, as well as competitive trade practices of other countries.
- ✓ Over the next few years, reduce the ad valorem tariff equivalent on cement and steel bars from their effective duty rates of 16-17 percent to more competitive MFN rates of 5 to 10 percent.
- ✓ Reduce nominal tariff dispersion by moving to fewer rates in stages that would lead to a multi-tier structure of three to five rates across industries.
- ✓ Gradually reduce tariffs on inputs for the selected industries to zero to improve their cost competitiveness and provide greater effective rates of protection.
- ✓ In the interim, allow duty-free access to foreign inputs through the introduction of duty drawback and temporary admission systems.

While these prescriptions for the industries may appear daunting, without them there is a strong likelihood that the competitiveness of the industries will be eroded following the country's accession and full implementation of the Action Plan for compliance with WTO rules. For the private sector, it means establishing realistic industrialization targets that match the country's human and natural resource development potential; for the government, it means more effectively coordinating plans, programs and implementation projects across agencies; and for development partners and donors it means improve collaboration among agencies so as to ensure complementarity of programs and projects supporting the country's industrial development program.



1. Introduction and Coverage of the Study

1.1 Industry Profiles

The present study examines the impact of Lao PDR’s accession to the World Trade Organization (WTO) on the country’s cement, steel bars and beer industries. The importance of these industries to the economy is significant in terms of output, employment and linkages to other downstream and upstream activities. Cement and beer each contribute 10 percent to the total value of industrial activity, and steel contributes about 3 percent of the total. The three industries together employ 2,400 persons. Within the construction industry, cement and steel jointly account for nearly one-third of value added, which itself represents a third of total industrial production of the country (Figure 1.1). The following is a brief description of the industries:

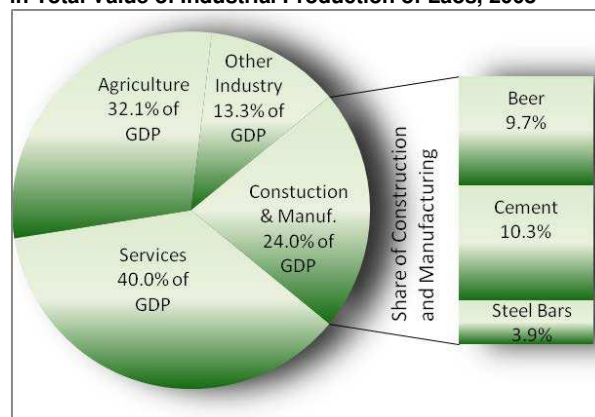
Cement – The cement industry in Laos was established in the mid-1980s and it now produces about 830 thousand metric tons of the country’s 1.4 million tons of annual cement utilization. The industry employs about 1200 persons, and contributes about US\$ 70 million a year to the Lao economy in terms of value added. The two main cement plants are the Vangvieng I & II Cement Plants and new plants are located in Khammoune and Savannakhet provinces. Vangvieng Cement Plant I was established in the district of Vangvieng (Vientiane Province) in 1994 with the support of a loan from the Chinese government. It produces Cement Portland P-525 and P-425 using domestic coal and limestone from Vangvieng and gypsum from Savannakhet.

Vangvieng Cement Plant II was established in 1998, and it is jointly owned by Lao Agricultural and Forestry Development and Service company (40% share) and Yunnan International Economic-Technical Cooperation (60% share). In 2004 Lao Agricultural and Forestry Development and Service Company also entered into a joint venture with Construction Material Yunnan Company of China build clinker plant in Savannakhet with a production capacity of 180,000 tons per year to supply clinker to cement plants

located in Khammoune, Savannakhet and Vangvieng. Domestic supplies of one of the two principle raw materials, gypsum, is abundant in Laos, but clinker supplies are limited and much of it is imported from Thailand and Vietnam.¹

Steel Bars - The steel industry of Laos produces about 24 thousand tons of the country’s 135 thousand tons of annual utilization of steel bars. Domestic production therefore supplies about one-fifth of the country’s total consumption needs. The industry employs about 400 persons, and contributes about US\$ 27 million a year to the Lao economy in

Figure 1.1: Share of Cement, Steel Bar and Beer Industries in Total Value of Industrial Production of Laos, 2008



Source: Department of Statistics, Ministry of Planning and Investment, and Ministry of Industry and Commerce.

¹ For details on the industry, see Sitthiroth Rasphone et al, “Protection of the Lao Cement Industry in the Wake of Trade Liberalization”. Vientiane, National Economic Research Institute (NERI), undated.



terms of value added. There are over 20 steel factories in the country, the largest of which is Vientiane Steel Industry (VSI). Their combined total production capacity is about 200,000 metric ton a year. Production capacity is therefore over eight times greater than existing production, but demand for locally produced steel bars is low. Most of foreign imports originate in Thailand and, to a lesser extent, in China and Vietnam. Significant differences in the domestic and neighboring steel producing technologies and production scales have created large differences in the competitiveness of those industries. Learning and absorption of imported technology have been important to the success of the steel industry. VSI has benefited from the Lao Clean Production Programme of the Ministry of Industry and Commerce, funded by UNIDO, as a means of improving steel production methods. These and other types of government support have been an important contributor to the development of the steel industry throughout Southeast Asia, especially since the introduction of integrated steelworks requires large investment. Nonetheless, the key factor determining the successful development of the industry in countries has been the absorption of technologies and backward linkages into the growth of steel-using industries like electronics components and other consumer-oriented industries.²

Beer – Beer is produced by the Lao Brewery Company and the Asia Pacific Breweries. Lao Brewery Company (LBC) was founded in 1971 and soon thereafter it became a state-owned-enterprise (SOE). In 1993 it entered into a joint venture with two foreign companies, and it has recently partnered with Carlsberg Brewery, which holds 50 percent of LBC's shares. The Government holds the remaining shares. Asia Pacific Breweries initiated production of Tiger, ABC, Nam Khong beers in Laos in March 2008. It is a joint venture with the Government, which holds 25 percent of the shares, as well as a locally-based partner, SBK Consultant, which holds 7 percent of the shares. Local beer brand production is also emerged in Savannakhet. These developments have increased competition within the Lao domestic beer market. The brewing sector currently employs about 800 persons, and contributes nearly US\$ 75 million a year to the Lao economy in terms of value added. The indirect impact of the sector on the agricultural and hospitality sectors is substantial. The Government receives revenue from a 10 percent turnover tax and an excise tax of 50 percent that are imposed on domestic producers and foreign supplies of beer alike. In addition, a 40 percent duty rate applies to foreign imports.

1.2 Lao PDR's WTO Accession Process

Lao PDR applied for accession to WTO in 1997 and the practical work towards accession began with the Working Party meeting on October 2004. In November 2006 the Government submitted to the Working Party an initial offer on goods and the applied tariff rates, and in October 2007 it submitted an initial offer on trade in services.³ The exact timing of Lao PDR's accession to WTO depends on the momentum of the accession process and the requisite amendments of laws and regulations. Nonetheless, the next meeting of the working party in late 2009 or early 2010 will examine elements of a draft working party report, which will include Laos' first possible commitments on implementing the WTO agreements.⁴

² For a comparative analysis of the steel industries among the Southeast Asian countries, see Hajime Sato, "The Iron and Steel Industry in Asia: Development and Reconstruction". Institute of Developing Economies, Discussion Paper No. 210, August 2009.

³ World Trade Organization document WT/ACC/SPEC/LAO/3 (restricted), October 2007.

⁴ WTO Secretariat, "Laos turns to future WTO membership commitments". WTO: 2009 News Items. 14 July 2009. Available: http://www.wto.org/english/news_e/news09_e/acc_lao_14jul09_e.htm.



In negotiating its accession, Laos will be limited in its capacity to promote and protect domestic industries. A key guiding principle of WTO is that protection of domestic industry should be limited to tariff measures and that non-tariff barriers like quantitative and qualitative controls be eliminated or converted to tariffs. These requirements are, nonetheless, subject to exceptions related to balance of payments difficulties, safeguards and other rules, or for the protection of public health or national security (GATT Articles XII, XVIII, XIX, XX and XXI). As a least-developed country (LDC), Lao PDR's application for membership in the WTO is covered by the 2002 General Council guidelines for accelerating membership negotiations.⁵ Under those guidelines WTO Members are to exercise restraint in seeking concessions and commitments on trade in goods and services from acceding LDCs. Moreover, transitional periods and arrangements are provided under specific WTO Agreements to enable acceding LDCs to effectively implement commitments and obligations. These transitional provisions are to be granted in accession negotiations, taking into account individual development, financial and trade needs of Laos. Transitional periods and arrangements are to be accompanied by Action Plans for compliance with WTO rules, with the ultimate elimination of those transitional arrangements within a specified period of time.

In its transition to a market economy, Laos confronts mixed challenges in promoting its local industries while concurrently fulfilling its obligations under the WTO. As such, the Government will need to put in place proper mechanism and measures that are in compliant with WTO rules and concurrently institute various initiatives that support the Sixth National Socio-Economic Development Plan (2006-2010). Existing protection of certain industries like those of beer, cement and steel bars could affect the speed of the WTO accession negotiations. As such, the present study examines the implications of WTO accessions on the selected domestic industries of cement, steel bar and brewery with a view to developing recommendations on how to concurrently manage the Government's domestic strategic objectives with its effective involvement in global economy.

1.3 Coverage and Organization of the Study

The overall objectives of this study are (a) to provide a clear understanding on WTO agreements and disciplines related to the promotion and protection of the domestic industry for the Ministry of Industry and Commerce (MOIC), which is the agency to lead the WTO accession negotiations; (b) to raise awareness among policy makers and industry players of proper measures for the promotion and protection of domestic producers, in particular the construction materials and beverage industries; and (c) to contribute to an improvement in the legal and regulatory framework, and the administrative capacities to ensure compliance with WTO requirements. The study aims to (i) assess the cement, steel bars and beer industries; (ii) provide a detailed description of trade and industrial policies in each subsector; (iii) assess import duties and non-tariff barriers; (iv) assess the impacts of accession to WTO on these sectors and policy-making; and (v) make recommendations on tariff reduction strategies and alternative protection measures.

The study covers the following areas: (a) an overall assessment of cement, steel bars and beer industries, including their structure, competitiveness, potential growth, and contribution to the national economy; (b) a description of trade and industrial policies in

⁵ World Trade Organization, "Accession of Least-Developed Countries". Document WT/L/508, 20 January 2003.



each subsector; (c) an assessment of import duties and non-tariff barriers, including currently applied Most Favored Nation (MFN) tariffs, CEPT-AFTA rates, and NTBs in the form of import licensing, discriminatory taxes and other relevant measures; and (d) an assessment of the impacts of accession to WTO on these sectors and policy-making, including an examination of existing Lao PDR laws and regulations relevant to the requirements of the WTO and their WTO-consistency. Recommendations are provided on tariff reduction strategies and alternative protection measures that could be adopted by the Government of Lao PDR in the context of its WTO accession process. These recommendations take into account special and differential treatment provisions accorded to the country under its LDC status.

It should be noted that the present study is designed to supplement rather than duplicate earlier industry studies. Following the initial fieldwork of the study and during the meeting on preliminary findings, MOIC indicated its desire that the study avoid duplication of earlier works and instead focus on an assessment of the WTO impact on the selected industries. Reference is made throughout the study to those other studies. Nonetheless, special reference is here made to a recent NERI study on cement, which provides comprehensive information on the structure and operation of that industry in Laos.⁶ The interested reader is referred to that study for details about the structure and operation of the industry.

The study is organized as follows:

- Chapter 1 provides an introduction to the study, an overview of the industries covered, Lao PDR's ongoing WTO accession process, and the coverage and organization of the study;
- Chapter 2 reviews trade and industrial policies as they relate to the selected industries, especially the WTO-consistency of laws and regulations;
- Chapter 3 assesses the factors determining the competitiveness of the selected industries in the context of foreign competition, and the growth potential of those industries;
- Chapter 4 provides a comprehensive analysis of tariff and non-tariff measures in the industries, the effective rates of protection, and the total protection given to the industries in terms of the ad valorem tariff equivalents of non-tariff measures;
- Chapter 5 examines the impact of WTO accession on the industries in terms of output, employment, imports, government revenue and effective rates of protection under alternative trade policy regimes; and
- Chapter 6 discusses the arguments for protection and liberalization of the industries, and the conversion of non-tariff measures to ad valorem tariffs; it then summarizes the results of the study and concludes with some policy and institutional recommendations.
- Annex A shows how to derive ad valorem tariff equivalents of existing non-tariff measures in the industries, as well as their effective rates of assistance.
- Annex B offers a practitioners guide to calculating effective rates of protection in the industries.
- Annex C presents trade statistics of the industries.
- Annex D lists the persons interviewed during the course of the study.
- Annex E provides a list of references used in the study.

⁶ Sitthiroth Rasphone et al, "Protection of the Lao Cement Industry in the Wake of Trade Liberalization". Vientiane, National Economic Research Institute (NERI), undated.



2. Trade and Industrial Policies

2.1 National Trade and Industrial Policies

The Government has identified key priority industries to be promoted under its Strategy on Industrialization and Modernization (2001-2020). They include the construction materials industry of cement and steel bars. The strategy is based on, first, human resource development to boost the country's industrialization process and, second, investment in research and development (R&D). It also encourages inward FDI flow and the development of local capacity to absorb the technological transfer. The construction sector is also mentioned explicitly as a strategic sector for the country's development in the National Socio-Economic Development Plan (NSEDP) for 2006-2010.⁷ Under the NSEDP, the Government is promoting the private sector and encouraging foreign companies to invest more capital in developing the target industries. In support of those initiatives, it is implementing development policies for industries that rely on domestic materials as a means of increasing their value-added and ensuring the broadest impact on economic development. As such, much of the development of cement and steel production is oriented towards expanding upstream activities in each of the industries.

Lao PDR's negotiations for WTO membership involve mutual agreement on adjustments needed to bring the trade regime in line with the way that member countries regulate trade, and agreeing to the rules of accession that conform with the Government's development goals. Thus, while WTO consistency is important, equally important is the Government's development strategy for the construction materials and brewery industries that is based on the broader needs of the country and its people. As such, the Government has established a set of guidelines for the industries in a manner that is consistent with the NSEDP 2006-2010. In particular, the guidelines seek to improve the competitive position of those infant industries by providing temporary protection to domestic producers in order to provide them with time to adopt new technologies, lower production costs, and realize economies of scale. During the transition to fully-competitive industries, it is expected that firms will take advantage of the protection given to them to increasingly link their production with external sources of technology, leverage the expertise and capacities of those sources and learn to use and adapt them to their production processes as a means of enhancing competitiveness.⁸

At the same time, the Government is aware of the need to foster private sector initiative, and recent plans have highlighted the importance of improving opportunities for the private sector, especially by reducing barriers to doing business. As such, Lao PDR's industrial development plans have sought to promote these domestic industries in a way that allows them to compete with foreign supplies.⁹ Specific initiatives include, for example, the application of a quality management system for ISO certifications, which have already

⁷ See UNIDO, "Lao PDR: Medium-Term Strategy and Action Plan for Effective Industrial Development". UNIDO Integrated Programme for Lao PDR, May 2003.

⁸ See UNDP, "National Human Development Report: International Trade and Human Development". Lao PDR 2006.

⁹ See UNIDO, "A Comprehensive Framework to Foster Economic Initiative in LAO PDR; Lao PDR: Medium-term Strategy and Action Plan for Industrial Development, UNIDO Integrated Programme for LAO PDR: Vientiane, 2003.



been granted to companies within the brewery, cement and steel bar industries. This certification allows these companies to better compete with foreign firms, particularly those under current government and donor procurement procedures.

In its trade strategy, Lao PDR has embarked on major reforms leading to a gradual liberalization of external trade that accelerated after the country's accession to ASEAN in 1997. As a member of the ASEAN Free Trade Area (AFTA), it began implementation of the AFTA Common Effective Preferential Tariff (CEPT) scheme in 1998, and in January 2008 it completed a major milestone in the liberalization schedule by reducing import duties on 95 percent of products from ASEAN countries to between 0 and 5 percent.¹⁰ Beer is subject to a CEPT rate of 40 percent until 2013, 20 percent in 2014, and zero thereafter. Cement is subject to a 5 percent rate until 2014 and zero thereafter. Steel bars has a CEPT rate of zero (0) percent effective 2008.¹¹ The Lao Brewery Company, which is the major producer of beer in Lao, will benefit from the reduction of barriers among AFTA countries. With the duty rate reduction in Thailand from 60 percent MFN rate to 5 percent until 2011 and zero thereafter, Lao Brewery expect to substantially increase its shipments to that market.¹²

Lao PDR and the United States signed a Bilateral Trade Agreement in 1997 and Normal Trade Relations was granted in February 2005. It is the most comprehensive agreement that Lao PDR has signed to date since it involves deep commitments that mirror key areas under the WTO agreements. Despite that fact that the United States is the second largest source of foreign investment in the Lao PDR, trade between the two countries remained limited until normal trade relations (NTR) were established in November 2004.¹³ Thereafter, Lao exporters gained direct access to the US market, rather than being restricted by prohibitive US tariffs. In the short-run, the country's industries that stand to benefit the most from increased market access are the garment and handicraft sub-sectors. Lao PDR has been exporting beer to the US market since 1999. Its export level to that market reached a high of nearly US\$ 170 thousand in 2000 and was almost US\$ \$50 thousand in 2008. Lao Brewery Company has continued to explore the market and expects to further penetrate the market in the future.¹⁴ The country is also engaging in free trade area (FTA) negotiations with ASEAN-dialogues partners, namely, China, the Republic of Korea, Japan, India, and

¹⁰ For an analysis of the effects of AFTA on Lao PDR, see Phouphet Kyophilavong, "Analyzing the effect of AFTA on Lao economy: Macroeconomic model approach". National University of Laos, Faculty of Economic and Management. Paper prepared for the ESRI Asia Workshop on Economic Modeling on Deepening Interrelationships among Asian Countries, held on November 30, 2004 in Bangkok, Thailand.

¹¹ Steel bars are classified under as Harmonized System (HS) items 7213 (Bars & rods, iron & na steel, h-r irregular coils); 7214 (Bars & rods, iron & na steel not elsewhere classified); 7215 (Bars & rods, iron & na steel not elsewhere classified); 7221 (Bars and rods, stainless steel, hot-rolled, irregular coils); 7222 Bars & rods, straight steel not elsewhere classified, angles, straight steel); 7227 (Bars & rods alloy steel not elsewhere classified, hot-rolled irregular coils); and 7228 (Alloy steel not elsewhere classified bars).

¹² The duty rate in Thailand was initially established at 5 percent until 2009 and zero thereafter. However, the duty rate was subsequently extended to 2011 (see Digital Journal, 20 September 2007, available: http://www.digitaljournal.com/article/230699/Beer_Lao_delays_export_plans).

¹³ P.J. Gunawardana and S. Sisombat, "Trends and Patterns of Foreign Direct Investment in Lao PDR". School of Applied Economics and Centre for Strategic Economic Studies, and Victoria Graduate School of Business, Victoria University, January 2008. The data used in the report is from the Ministry of Planning and Investment of the Government of Lao PDR.

¹⁴ Fund for Reconciliation and Development, "Summary of the US-Lao NTR Study Tour". Available: <http://www.frrd.org/LaoTrade/NTRSummary.htm>.



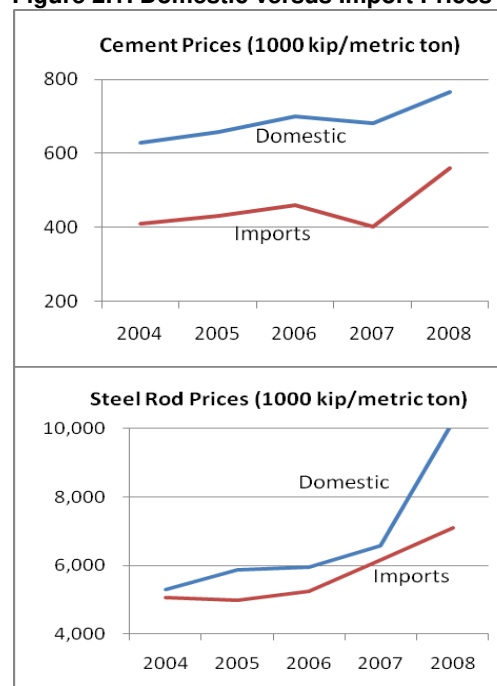
Australia and New Zealand. Lao PDR also benefits from the Asia Pacific Trade Agreement (APTA), which seeks to deepen trade cooperation and integration among developing countries in areas beyond traditional tariff concessions to cover non-tariff measures, trade facilitation, trade in services and investment.¹⁵

Lao PDR is eligible to benefit from the European Union's generalized system of preferences (GSP) called 'Everything but Arms' (EBA) initiative. It extends duty and quota-free access to all products except armaments originating in least developed countries. EBA provides the most favorable regime available since it grants duty free access to Lao PDR and other least developed countries to the EU market if they meet the rules of origin requirements. About 70 percent of Lao PDR exports to the EU market currently receive preferential treatment, which includes beer. Exports of beer from Laos to Europe reached nearly \$50,000, which represented one-fifth of the country's total exports of the product.¹⁶ Beer is subject to sanitary and phytosanitary (SPS) requirements imposed by the EU market.

2.2 WTO Compliance of Legal and Regulatory Environment

Regional and bilateral processes have supported the multilateral liberalization process that is currently underway. While the pace of trade liberalization in Laos has been established by AFTA, the country's membership in the WTO will require a number of additional disciplines on trade-related policies.¹⁷ During the last year the Government has made the following modifications to the trade regime as it affects the selected industries

Figure 2.1: Domestic versus Import Prices



Sources: Internal Trade Department, Ministry of Industry and Commerce, and COMTRADE database. Cement import prices refer to Portland cement (HS2523) and steel rod prices refer to Bars & rods, iron & na steel (HS 7214).

¹⁵ Previously named the Bangkok Agreement, APTA is an initiative of UNESCAP that aims to promote intra-regional trade among developing countries through the exchange of mutually agreed concessions.

¹⁶ Data from the United Nations COMTRADE database. Available: <http://comtrade.un.org/>.

¹⁷ Partly in compliance with the need to bring laws into international standards as part of the WTO accession process, the National Assembly is developing or amending the following trade and investment-related laws in the next two-to-three years:

- In 2008, law on handicraft; law on mass media; veterinary law; law on tariff nomenclature; law on management of public investment projects; law on consumer protection; law on mining; law on promotion of domestic investment; law on contracts;
- In 2009, law on agents and brokers; law on transfer of assets to capital; law on construction;
- In 2010, law on professional associations; law on implementation of international treaties; law on printing; law on measurement standards; law on processing industry.



covered by this study:¹⁸ (a) Under TRIMS, the previous incentive laws have been replaced by a new Investment Law passed by the National Assembly that eliminates the local content related investment incentives as well as discriminatory provisions found in the previous Domestic and Foreign Investment Promotion Laws; (b) for import-export procedures, a Decree on Import Licensing Procedures has been adopted that incorporates the requirements of the Import Licensing Agreement; (c) in line with the requirements of GATT Article VIII Cost-based importation charges, a Presidential Decree on Fees and Service Charges has been amended under which the previous ad valorem inspection fee for imported food has been replaced by a cost-based fee; (d) in customs valuation, a regulation was adopted to give effect to the 2006 Customs Law and its implementing Decree; (e) in TBT/SPS, the National Food Safety Policy and Regulation on Food Safety Management were adopted; and (f) in the area of tax reform, the VAT Law was passed and will enter into force on 1 January 2010. Beyond these modifications, the following are the relevant WTO requirements for Lao PDR's legal and regulatory regime affecting the brewery and constructions sectors examined in this study.

Investment Measures – Members of the WTO accession working party have noted Lao PDR's export performance and local content requirements, as well as provisions in Law No. 11/NA requiring foreign-invested companies to hire at least 90 percent of the work force locally (Article 12.5) and obliging them to train, upgrade professional skills, and transfer technology to the local employees (Article 13). While recognizing the importance of technology transfer, some members of the working party have not consider mandatory provisions on technology transfer helpful for the investment climate; the 90 percent local workforce requirement was discriminatory as well as unhelpful; and incentives linked to minimum 50 percent local raw material were incompatible with the Agreement on Trade-Related Investment Measures (TRIMs) and Article 3 of the Agreement on Subsidies and Countervailing Measures (ASCM).

Pricing Policies – Prime Minister's Decree No. 207/PM of 11 October 2001 authorized the Ministry of Industry and Commerce to monitor prices or institute price controls. Based on the Prime Minister's Decree, the Ministry had issued Instruction No. 0334/MOC/ITD of 22 March 2002, making some 30 products/product groups subject to price controls, including maximum prices on cement and steel bars. Imported cement and steel are, however, not subject to price controls. The differential is shown in Figure 2.1. The import price is the c.i.f. price, while the domestic price is the maximum price set by the Government and calculated on the basis of production costs provided by the cement and steel plants. It includes both the production and distribution costs to the main markets. Licensing and other controls over imports allow the domestic price to exceed that of foreign suppliers. While the price differential is fairly stable, sharp market price variations are not always captured by government authorities in their domestic price adjustment. This situation occurred recently in the case of steel rods, when the market price surge up at the beginning of 2008 was followed by an abrupt fall in prices in July and August of that year. However, domestic prices continued to rise and did not adjust downward until November 2008.

Tariffs and Other Taxes – Lao PDR had applied the ASEAN Harmonized Tariff Nomenclature (AHTN) since 1 October 2003. The nomenclature is based on the 2002 version of the Harmonized Commodity Description and Coding System (HS). All MFN

¹⁸ WTO Secretariat, "Laos turns to future WTO membership commitments". WTO: 2009 News Items. 14 July 2009. Available: http://www.wto.org/english/news_e/news09_e/acc_lao_14jul09_e.htm.



customs duties are *ad valorem*, applied on the c.i.f value of the imported goods. There are no tariff rate quotas on any products. Excise duties range from 5 to 90 percent, and a 50 percent rate is applied to alcoholic beverages. That tax rates does not distinguish between imported and domestically produced goods. A turnover tax based on Tax Law No. 04/NA of 19 February 2005 constitutes a general indirect tax on the consumption of goods and services, levied at a rate of 5 or 10 per cent, which is collected on imports at customs checkpoints and from wholesalers.¹⁹ A value added tax (VAT) will replace the turnover tax, probably in 2010.

Quantitative Import Restrictions – Steel and cement are subject to import licensing. Prime Minister's Decree No. 205/PMO "On Export and Import" of 11 October 2001 constituted the basis for Lao PDR's present import and export controls, and the Ministry of Industry and Commerce issued Notifications to specify the goods subject to approval or non-automatic or automatic import licensing. The procedure for imported steel bars and cement are stipulated in Regulation No. 1036/STEA-PMO. In practice, permits for importing cement and steel are formally approved by Government authorities only when the domestic industries are unable to fulfill the demand from local producers destined for the construction of development projects. Under the WTO, however, Article 2.2(b) of the Agreement on Import Licensing Procedures authorized automatic import licensing to be maintained "as long as the circumstances which gave rise to its introduction prevail and as long as its underlying administrative purposes cannot be achieved in a more appropriate way". For that reason, the licensing regime of Lao PDR continues to be under review to adapt to WTO requirements regarding automatic and non-automatic licensing procedures.

Anti-Dumping, Countervailing Duties and Safeguard Regimes - Lao PDR has no legislation authorizing the application of anti-dumping, countervailing, or safeguard measures at present, but the Government has not exclude the possibility that such legislation could be implemented in the future. In any event, the Government has confirmed that it would not apply any anti-dumping, countervailing or safeguard measures until it had notified and implemented appropriate laws in conformity with the provisions of the WTO Agreements on the Implementation of Article VI of the GATT 1994, on Subsidies and Countervailing Measures, and on Safeguards.²⁰

Export Subsidies - Lao PDR has reserved its rights to special and differential treatment as an LDC under Article 27: Annex VII of the Agreement on Subsidies and Countervailing Measures (ASCM), and it may have included incentives contingent on export performance within the meaning of Article 3.1(a) of the ASCM in its Law No. 10/NA "On the Promotion of Domestic Investment" (Articles 9 and 11); Law No. 11/NA "On the Promotion of Foreign Investment" (Articles 16 and 18); and in Decree No. 301/PM of the Prime Minister "Regarding the Implementation of the Law on the Promotion of Foreign Investment" (Article 15 and Annex 2). As Article 25 of the ASCM obliges WTO Members to notify all subsidies, including prohibited subsidies contingent upon export or the use of domestic over imported goods, Lao PDR has requested technical assistance from international partners to fulfill the notification requirement under Article 25 of the ASCM. As an LDC,

¹⁹ According to Article 14 of the Tax Law, the taxable base for turnover tax on imported goods includes import duty and, where applicable, the excise tax. Domestically-produced goods destined for the internal market are taxed on the basis of the actual sales price, the actual value of the contract for goods produced under contractual arrangements, the total services income for services providers, and the actual price paid by the customers for sales on credit.

²⁰ WTO Secretariat, "Accession of the Lao PDR to the World Trade Organization: Factual Summary of Points Raised". JOB(07)/160. 26 October 2007.



Laos is exempted from the prohibition of export subsidies, but not from the prohibition of local content subsidies, so all local content subsidies need to be eliminated by the date of accession.

Technical Barriers to Trade, Standards and Certification – Decree of the Prime Minister No. 85/PM "On Management of Standards and Quality of Products and Goods" of 2 November 1995 constituted the basic legal framework for Lao PDR's present system of standards, technical regulations and conformity assessment. Amongst the relevant regulations in this area he pointed to the Regulation No. 1036/STEA-PMO "On Quality Inspection of Imported Goods" of 11 June 2002; Regulation No. 08/MOH of 4 January 2005 (e.g. food additives such as acetic acid and caffeine being subject to surveillance); and the Regulation "On the Control on Production, Export-Imported Safe Food" No. 586/MOH of 12 May 2006. Products subject to mandatory technical regulations were included in the notifications of the Ministry of Industry and Commerce concerning prohibited and controlled goods for importation and exportation, the most recent being the notification on Goods Subject to a Non Automatic Licensing of Laos, number 2151/STEA-PMO. For import management control, there is the Decree on Import Licensing Procedure on 180/PMO on 7 July 2009. A new Standards Law supplemented by implementing decrees and regulations establishes a TBT enquiry point testing facilities for construction materials and other products will be in place by 2011. Full implementation of the TBT Agreement is expected by 2012.

Sanitary and Phytosanitary Measures – Lao PDR is a member of the WHO Codex Alimentarius Commission²¹, the International Office of Epizootics²², and the International Plant Protection Convention²³. But implementation of many measures has not been carried out due to lack of technology, tools, financing, human resources, and staff capabilities. At the regional level, harmonization of SPS measures are treated under ASEAN,²⁴ and the it also participates in regional harmonization of, and alignment of SPS measures, technical regulations, standards and conformity assessment procedures on technical barriers to trade in the Greater Mekong Subregion (GMS).²⁵ In the brewery industry, SPS standards for the beverage industry are monitored by for food safety the Ministry of Public Health's Department of Food and Drug and the Department of Hygiene and Disease Prevention. Lao PDR needs to improve its risk assessment procedures, upgrade the existing legislation, and improve and develop its SPS-related processes and

²¹ The Codex Alimentarius Commission was created in 1963 by FAO and WHO to develop food standards, guidelines and related texts such as codes of practice under the Joint FAO/WHO Food Standards Program. The objectives of the program are protecting health of the consumers and ensuring fair trade practices in the food trade, and promoting coordination of all food standards work undertaken by international governmental and non-governmental organizations.

²² Office International des Epizooties (OIE) is an intergovernmental organization responsible for improving animal health worldwide, under a 1924 agreement to create the organization.

²³ The International Plant Protection Convention is an international treaty to secure action to prevent the spread and introduction of pests of plants and plant products, and to promote appropriate measures for their control. It is governed by the Commission on Phytosanitary Measures (CPM) which adopts International Standards for Phytosanitary Measures (ISPMs). The CPM has confirmed the IPP as the preferred forum for national IPPC reporting and the exchange of more general information among the phytosanitary community. The IPPC Secretariat coordinates the activities of the Convention and is provided by the FAO.

²⁴ Expert Working Group on Harmonization of Phytosanitary Measures in ASEAN.

²⁵ Under the GMS Trade Facilitation Working Group (TFWG) of the GMS.



infrastructure.²⁶ The principles of the SPS Agreement regarding science-based regulations, measures based on necessity, equivalence, nondiscrimination, and control, inspection and approval procedures have yet to be incorporated in domestic regulations. Laos is currently implementing regulation for the Food Law, and promulgating decrees or regulations on food controls. Lao PDR expects to be in full compliance with the SPS Agreement by 2012.

²⁶ The Government submitted an Action Plan for implementation of SPS measures to the WTO Secretariat in May 2006. It contains the timeline for completion of specific actions needed for Lao PDR to be fully compliant with the SPS Agreement. Among the key actions are (a) approval of new Veterinarian Law by 2009 and grassroots enforcement by 2009-20011; (b) strengthen laboratory and quarantine facilities by 2010; (c) promulgate training courses for technicians and specialists and establish a Veterinary Faculty in National University by 2010; (d) provide technical training programs for risk assessment systems, upgrade equipment for inspection, sampling, diagnosis and treatments, and implement risk analysis for the control of animals and animal products by 2010; (e) disease free areas and areas of low prevalence of animal infectious disease by 2010; (f) and, for food and drugs, establish the necessary control, inspection and approval procedures by 2010. All of these actions are contingent on financial support and successful implementation of technical assistance.



3. Competitiveness and Growth Potential

3.1 Factors Impacting on Competitiveness

Laos has a relatively low international competitiveness ranking in terms of both its macro and micro-economic indicators affecting trade and investment in the beer, cement and steel bar industries. Its low international ranking pervades three broad categories: (a) a policy regime that imposes considerable barriers to trade and investment, (b) relatively high costs of doing business, and (c) an exchange rate policies that effectively raises domestic costs relative to those of foreign sourced products.²⁷

For the trade regime, the previous chapter has enumerated the changes that Laos in undertaking to bring its legal and regulatory system within international standards that are compliant with the WTO. Institutional changes require an effective implementation system, however, and that of Lao PDR is rated as low relative to most other ASEAN countries (Table 3.1). In the context of the World Bank's governance indicators, effectiveness is a measure of capacity of governments to manage resources efficiently, and to formulate, implement, and enforce sound policies and regulations. Although low, Lao PDR's current percentile ranking is twice as high as it was in earlier years.

Table 3.1: Comparative Government Effectiveness among ASEAN Countries in 2008

	Percentile Rank (0-100)	Governance Score (-2.5 to +2.5)
Myanmar	1.9	-1.68
Laos	17.5	-0.84
Cambodia	19.4	-0.81
Vietnam	45.5	-0.31
Indonesia	47.4	-0.29
Philippines	55.0	0.00
Thailand	58.8	0.11
Brunei	79.6	0.89
Malaysia	83.9	1.13
Singapore	100.0	2.53

Source: World Bank, "Governance Matters: Worldwide Governance Indicators". Available: info.worldbank.org/governance/wgi/.

Table 3.2: Lao PDR's Doing Business Ranking

	Overall Rank	Starting Business	Construction Permits	Employing Workers	Registering Property	Getting Credit	Protecting Investors	Paying Taxes	Foreign Trading	Enforcing Contracts
Lao PDR	167	89	115	107	161	150	182	113	168	111
Brunei	96	153	75	4	183	113	119	22	48	160
Cambodia	145	173	145	134	116	87	73	58	127	141
China	89	151	180	140	32	61	93	130	44	18
Indonesia	122	161	61	149	95	113	41	126	45	146
Malaysia	23	88	109	61	86	1	4	24	35	59
Philippines	144	162	111	115	102	127	132	135	68	118
Singapore	1	4	2	1	16	4	2	5	1	13
Thailand	12	55	13	52	6	71	12	88	12	24
Vietnam	93	116	69	103	40	30	172	147	74	32

Source: International Finance Corporation (IFC), Doing Business database. Available: www.doingbusiness.org.

²⁷ The World Bank also categorizes competitiveness into (a) overall performance, (b) macroeconomic and market dynamism, (c) financial dynamism, (d) infrastructure and investment climate, and (e) human resources. Another approach is based on Michael Porter's determinants of competitiveness and the so-called Competitiveness Diamond. The model provides a framework for organizing the determinants of a country's competitiveness and economic growth potential and can be used to assess industry cluster competitiveness and to develop strategies for improving competitiveness. The approach is structured around (a) factor (input) conditions related to skilled labor, and infrastructure; (b) demand conditions related to size and type of accessible demand; (c) supporting industries and presence of supplier; and the context for firm strategy and rivalry.



For business practices, Table 3.2 shows the details of Lao PDR's ranking of ease of doing business. Laos ranks in the top one-third of ASEAN members and China in terms of ease of starting a business, and around the mid-point of all country rankings in ease of employing workers, paying taxes, and enforcing contracts. But it ranks in the bottom quartile in terms of obtaining construction permits, registering property, getting credit, protecting investors, trading across borders, and closing a business. The difficulty of accessing capital has been underscored in the Milken Institute's capital access ranking of Laos in the bottom 20 countries throughout the world, which is attributable to the lack of institutions needed to support and enhance business financing activities, access to financing institutions within the country, access to venture capital, and access to foreign capital.²⁸

In its macroeconomic environment, Lao PDR's real effective exchange rate has given rise to a situation that undermined the domestic competitiveness of the beer, cement and steel bar industries. The real effective exchange rate is the weighted average (geometric mean) of the kip's exchange rates against other major currencies, using the annual value of Lao PDR's trade with the respective countries as its weights. When converted to an index using a base period, the resulting "nominal effective exchange rate" measures the trade-weighted average of the kip's cross-rates with Lao PDR's trading partners. The international competitiveness of Laos is therefore reflected in the 'real effective exchange rate' (denoted REER), which takes into account both general price movements in Laos relative to that of each of its trading partners, and the cross exchange rate between the kip and the currency of each of its trading partners.

Table 3.3 shows the real effective exchange rates for Laos with the major competing countries in its domestic markets for beer, cement and steel bars. The year 2001 is used as a base year since the REER in that year with an overall balance in the country's balance of payments. The real cross-rates with all competing countries in the domestic markets for beer, cement and steel bars has risen, representing an improvement in the international competitiveness of the non-tradables sector. The way that the relative price of tradables to non-tradables is measured for Laos is based on the so-called Purchasing Power Parity (PPP) approach.²⁹ To the extent that consumers are responsive to relative

Table 3.3: Lao PDR Real Cross-Rates and Real Effective Exchange Rate (REER) with Competing Suppliers of Selected Industry Products

	REER	Real Cross-Rates		
		China	Thailand	Vietnam
1990	104.4	107.7	82.3	218.8
1991	98.8	128.1	88.7	224.0
1992	108.8	133.1	90.5	202.1
1993	109.3	127.3	94.1	176.1
1994	113.9	168.2	94.3	164.7
1995	111.1	154.5	95.2	152.4
1996	107.6	142.2	91.8	138.2
1997	97.1	122.7	95.2	119.7
1998	83.7	88.3	81.3	88.4
1999	86.6	96.6	81.7	92.6
2000	98.5	106.7	96.3	102.5
2001	100.0	100.0	100.0	100.0
2002	95.4	97.9	94.4	98.3
2003	90.4	94.7	89.1	92.9
2004	103.6	108.4	102.3	106.6
2005	105.0	110.2	104.2	105.7
2006	107.2	116.0	105.3	111.4
2007	104.1	112.5	101.4	113.2
2008	109.6	112.5	107.2	123.1

Note: REER denotes real effective exchange rate.
Source: Derived from data in International Monetary

²⁸ Based on data from the Milken Institute. Available www.milkeninstitute.org.

²⁹ The PPP exchange rate measure of REER is defined as $e^f_t = e^n P^f_t / P^d_t$, where e^n is the nominal exchange rate, P^f is the foreign currency price of goods purchased abroad, and P^d is the domestic price level. The foreign currency price is measured by the GDP deflator of Lao PDR's trading partners and the REER is a trade-weighted average of those trading partners. A fall in e^f represents an *appreciation* in a flexible exchange rate system, which under the purchasing power definition can be brought about by either a fall in the nominal exchange rate e^n , or a rise in the relative price of domestic goods (equivalent to a relative fall in the price of foreign goods). Conversely, a rise in e^f represents a *depreciation*, which is associated with either a rise in the



price differences between Laotian and foreign suppliers in the domestic markets for the products of the selected industries, the demand for domestically produced goods would have weakened in recent years. The results suggest that exchange rate policies have somewhat undermined domestic producers beer, cement and steel bars, and that demand for those domestically produced goods has not benefitted from those policies.

3.2 Growth Potential of the Industries

Lao PDR's growth potential for steel bars and cement is likely to be limited to its domestic market in the medium to long term, while beer has a larger potential for exports. The reason for limiting the markets for cement and steel bars to the domestic ones is that Laos faces still competition from neighboring countries and transportation costs for a landlocked country like Laos limit the potential for long-distance shipments to foreign markets. In contrast, beer exports have the potential for dynamic growth within Asia and in the European and United States markets. Indeed, beer exports from Laos have quadrupled so far this decade, albeit from a low initial level. The forecast is for an annual expansion of 7 percent in foreign sales over the medium term.³⁰

For the domestic market, Table 3.4 shows the potential for production expansion based on industry standards in each sector.

Table 3.4: Growth Potential of Industries in Domestic Market

		Unit for Beer	Units for cement & steel	Beer	Cement	Steel Bars
Per Capita Consumption	Current	L/yr	MT/yr	22.9	0.23	0.02
	Potential	L/yr	MT/yr	49.6	0.45	0.14
Total Consumption	Current	Mil. L	1000 MT	137.4	1,409.01	134.30
	Potential	Mil. L	1000 MT	297.4	2,700.17	840.05
Domestic Production	Current	Mil. L	1000 MT	136.3	831.20	23.9
	Potential	Mil. L	1000 MT	294.8	2,700.17	840.05

Note: L denotes liters; MT denotes metric tons.

Sources:

- Population from Department of Statistics, Ministry of Planning and Investment.
- Beer per capita beer consumption potential based on data from Kirin Holdings Company (available: http://www.kirinholdings.co.jp/english/ir/news_release051215_4.html).
- Beer, cement and steel bar production (actual) from Department of Statistics, Ministry of Planning and Investment.
- Beer consumption (actual) equals sum of domestic production and imports, based on COMTRADE database.
- Beer consumption (potential) equals beer per capita potential times population.
- Beer production (potential) assumes that current small proportion of imports will be maintained.
- Cement and steel bar production potential assumes self-sufficiency in the economy.
- Cement per capita consumption potential based on world average of 245 kg per person, compared with 425 average for China and Thailand, according to IBEF, "Cement", 2009.
- Steel per capita consumption potential based on world average, according to International Iron and Steel Institute, "World Steel in Figures" (Washington, DC, 2006).

nominal exchange rate e^t or a rise in relative prices of foreign goods (equivalent to a fall in relative prices of domestic goods). The inverse of the real exchange rate therefore measures export competitiveness, since variations in e^t influence the quantity of goods demanded in the foreign markets relative to competing foreign and domestic suppliers to those markets.

³⁰ Lao Brewery Company Limited, presentation on 2 October 2009.



- In beer, per capita consumption is currently equal to nearly 23 liters a year, whereas the average for the lower quartile of countries that consume alcoholic beverages is close to 50 liters a year. Assuming that imports retain their existing share in the future, the industry could double its existing production level.
- In cement, per capita consumption is presently 230 kgs per person a year, whereas neighboring Thailand and China have comparable levels of 425 kgs per person a year. At those levels, Lao consumption would expand by 90 percent over its present level and, if the economy were to become self-sufficient in that sector, production could expand by treble its current levels.
- In steel, per capita consumption is only 20 kgs per person a year, compared with a world average of 140 kgs. Total consumption has the potential to grow by six times its current level, and domestic production only accounts for less than one-fifth of existing utilization in the economy. The potential for the industry is therefore considerable, were it to become competitive and capable of substituting foreign imports.

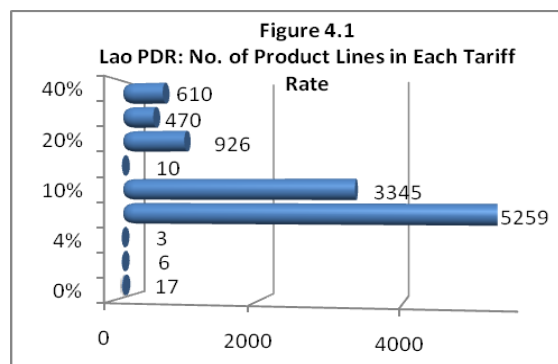


4. Tariff and Non-Tariff Barriers to Trade

4.1 Existing Tariff, Para-Tariffs and Non-Tariff Measures

a. Tariffs

The Government of Lao PDR applies the ASEAN Harmonized Tariff Nomenclature (AHTN) based on the Harmonized Tariff Nomenclature 2002 (HS2002), and it is currently in the process of introducing a new tariff nomenclature based on HS 2007.³¹ The most-favored-nation (MFN) tariff structure has been simplified to the six tariff rates of 5, 10, 15, 20, 30 and 40 percent, with an unweighted average tariff rate of 11 percent. Half of the tariff lines have a 5 percent rate, almost one-third have a 10 percent rate, nearly one-tenth percent have a 20 percent rate, and most of the remaining lines have a 30 or 40 percent rate (Figure 4.1).



Some industries like beer enjoy higher tariff protection, while others like cement and steel receive protection in the form of non-tariff measures.³² Most other ASEAN member countries also levy a high tariff on alcoholic beverage imports. Vietnam and Thailand, for example, apply a duty rate of 60 percent, while Indonesia applies the same 40 percent duty rate as Laos. In cement, three ASEAN member countries protect their industries with higher tariff rates than Laos, most notably Vietnam, which levies a 38 percent tariff on its imports of cement. Similarly, in steel, three countries have significantly higher tariffs than Laos, while Cambodia's tariff is modestly higher than that of Laos (Table 4.1).

Table 4.1: Comparative MFN Tariffs on Products of Selected Industries among ASEAN Member Countries

	Beer (HS2203)	Cement (HS2523)	Steel Bars (HS7213)	WTO Member?
Brunei	\$3/liter	0%	0%	Yes (1995)
Cambodia	35%	15%	7%	Yes (2004)
Indonesia	40%	0%	10%	Yes (1995)
Lao PDR	40%	5%	5%	No
Malaysia	RM 5/liter	0%	15%	Yes (1995)
Myanmar	10%	1%	1%	Yes (1995)
Philippines	na	na	na	Yes (1995)
Singapore	\$1.75/liter	0%	0%	Yes (1995)
Thailand	60%	10%	5%	Yes (1995)
Vietnam	59%	38%	10%	Yes (2007)

Source: ASEAN Secretariat.

Under AFTA, Lao PDR has since January 2008 reduced tariffs on most imported products from ASEAN countries to between 0 and 5 percent under the Common Effective Preferential Tariff (CEPT) scheme. Under the scheme, Laos has committed to extending MFN treatment to other ASEAN

³¹ There are two types of tariffs, *specific tariffs* and *ad valorem tariffs*. The *specific tariff* charges a fixed amount for each unit of goods imported, and the *ad valorem tariffs* charges a specified percentage of the c.i.f. value of imported goods. In Lao PDR, tariffs refer to *ad valorem* rates.

³² In this study, we use 'non-tariff measures' interchangeably with 'non-tariff barriers', following the WTO Secretariat's terminology.


Table 4.2: Comparative AFTA Tariffs on Products of Selected Industries

	Beer			Cement			Steel Bars		
	2008	2009	2010	2008	2009	2010	2008	2009	2010
Brunei	GE	GE	GE	0%	0%	0%	0%	0%	0%
Cambodia	20%	20%	5%	15%	10%	5%	5%	5%	5%
Indonesia	40%	40%	40%	0%	0%	0%	5%	5%	0%
Lao PDR ^{1/}	40%	40%	40%	5%	5%	5%	0%	0%	0%
Malaysia	GE	GE	GE	0%	0%	0%	5%	5%	5%
Myanmar	5%	5%	5%	1%	1%	1%	1%	1%	1%
Philippines	5%	5%	5%	0%	0%	0%	3%	3%	3%
Singapore	0%	0%	0%	0%	0%	0%	0%	0%	0%
Thailand	5%	5%	0%	0%	0%	0%	5%	5%	5%
Vietnam	5%	5%	5%	5%	5%	5%	5%	5%	5%

GE = General exception

^{1/} Tariff of 20% in 2014 and 0% in 2015 on beer; tariff of 0% in 2015 on cement.

Source: ASEAN Secretariat

member countries. None of the products on the General Exclusion List and Products on the Sensitive List that are to be phased into 0-5 percent tariffs by January 2015 relate to beer, cement or steel bars. What is noteworthy is that the degree of protection of ASEAN member countries within the CEPT scheme is considerably lower for the products in the industries covered in this study. In beer, only Indonesia retained the same high tariff rate as Laos, while Brunei and Malaysia have included the product in their General Exception list. Lao has, however, agreed to reduce the CEPT rate on beer to 20 percent by 2014 and to 0 by 2015. The CEPT rate is currently on 0 for steel bars and the rate for cement will be reduced to 0 in 2015 (Table 4.2).

The ability to compete both domestically and in international markets is partly attributable to production costs, and those costs can be undermined by tariffs on material inputs to domestic industries. Table 4.3 shows the duty rates on tradable inputs of beer, cement and steel. On first viewing, it appears that in cement there are several countries that impose unduly high tariffs on their material inputs among ASEAN members, namely, Cambodia, Indonesia, Malaysia, Vietnam, and Laos. But an assessment of the import tax burden based on the production cost coefficients on those tradable goods reveals an even greater burden of those same countries: in Laos the weighted-average tariff on material inputs for cement is 7.3 percent, while it is 8.5 percent in Cambodia, 7.7 percent in Vietnam and 7.3 percent in Malaysia. In steel, the opposite pattern exists: the production-weighted average duty rates on the material inputs are lower than the unweighted average in Cambodia (5.2% weighted average versus 6.1 unweighted average) and Malaysia (4% weighted average versus 7.3% unweighted average). Only in Laos is the nominal rate of protection (NPR) of 5 percent on the industry output the same as the NPR for material inputs.

Additionally, the existence of tariffs on tradable inputs that are also used in export-oriented industries can create an anti-export bias. Those industries attempting to export rather than sell in the domestic market receive no output tariff protection but must nevertheless pay the protected input costs of tradable inputs. While duties on inputs could be offset by a duty-drawback scheme, no such system exists in Laos.

b. Para-Tariff Measures

Excise Taxes: Excise taxes are levied on beer at a rate of 50 percent, which is applied on top of the duty rate of 40 percent on that good.³³

³³ Hence, the combined duty and excise tax paid on imported beer is $M(1+t)(1+e)$, where M is the ad valorem value of imports, t is the tariff rate, and e is the excise rate.


Table 4.3: Comparative MFN Tariffs on Inputs of Selected Industries

BEER											
Input:	HS code	Brunei	Cambodia	Indonesia	Laos	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
Malted Barley	1003	0%	7%	0%	5%	0%	0%	na	0%	B2.75	0%
Unmalted grains	100890	0%	7%	5%	5%	0%	0%	na	0%	B2.75	0%
Sugar	170290	0%	7%	5%	10%	0%	1%	na	0%	1%	0%
Hops	130213	0%	7%	5%	10%	0%	15%	na	0%	20%	27%
Yeast	210210	0%	7%	5%	5%	15%	15%	na	0%	10%	5%
CEMENT											
Input:	HS code	Brunei	Cambodia	Indonesia	Laos	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
Limestone	2521	0%	7%	5%	5%	5%	3%	na	0%	1%	10%
Coal	2701	0%	0%	5%	5%	0%	0%	na	0%	1%	0%
Diesel	271019	\$0.023/ltr	15%	0%	5%	0%	1.5%	na	0%	B.001	0%
Gypsum	2520	0%	7%	5%	5%	0%	1%	na	0%	5%	0%
Clay	2508	0%	7%	5%	5%	5%	1%	na	0%	1%	0%
Cement Bags	39231090	0%	15%	20%	20%	30%	5%	na	0%	0%	26%
Refractory	6901	0%	7%	5%	5%	20%	1.5%	na	0%	10%	5%
Lubricant	3403	0%	7%	7.5%	10%	10%	1.5%	na	0%	5%	5%
Grinding Media	6804	0%	15%	5%	5%	0%	1%	na	0%	5%	20%
Spare Parts	8409	0%	7%	0%	5%	0%	1%	na	0%	10%	15%
STEEL RODS											
Input:	HS code	Brunei	Cambodia	Indonesia	Laos	Malaysia	Myanmar	Philippines	0%	Thailand	Vietnam
Iron Ore	260111	0%	7%	0%	5%	0%	1%	na	0%	0%	0%
Coking coal	270112	0%	0%	5%	5%	0%	0%	na	0%	0%	5%
Scrap iron or steel	720449	0%	7%	0%	5%	0%	1%	na	0%	0%	0%
Oxygen	280440	0%	7%	5%	5%	5%	1%	na	0%	5%	3%
Ferro-alloys	720299	0%	7%	0%	5%	0%	1%	na	0%	0%	0%
Fluxes	381090	0%	7%	0%	5%	0%	5%	na	0%	0%	3%
Refractory	6901	0%	7%	5%	5%	20%	1.5%	na	0%	5%	5%

Source: ASEAN Secretariat

Value Added Tax: The VAT will come into force in 2010 and full implementation will take several years.³⁴ It will replace the turnover tax collected on collected from imports, sales of goods and general services. In the case of beer, cement and steel imports, the turnover tax or VAT is levied on the total value of the import that includes the duty and, in the case of beer, the excise tax.³⁵

c. Non-Tariff Measures

Despite relatively low tariff rates, Lao PDR's trade regime is more restrictive than that of many other East Asian economies. Import and export licensing systems are still in place, although somewhat streamlined in recent years. Efforts to adopt a market-oriented regulatory environment are underway and the WTO accession process may require the conversion of some non-tariff measures to their equivalent tariffs. Currently, non-tariff barriers to trade (NTBs) and quantitative import restrictions remain and in the case of cement and steel, they are the main binding restriction.

The following measures are currently applied to cement and steel bars as a means of controlling the volume of imports:

- *Automatic Licensing Measures:* Cement and steel bars, among others, are considered to be strategic goods subject to State control. As such, they are subject to import licensing restrictions.
- *Quantitative Control Measures:* Quantitative controls are set on the importation of steel bars for construction and all types of cement, among others.

³⁴ Decree of the President of the Lao People's Democratic Republic on the Promulgation of the Value-Added Tax, Vientiane, 16 January 2007.

³⁵ Note that in the case of beer the excise tax is applied to the imported value that includes the tariff, and the VAT or turnover tax is applied to the import value that includes both the tariff and VAT. Hence, the total tax paid on imported beer is $M(1+t)(1+e)(1+v)$, where M is the ad valorem value of imports, t is the tariff rate, e is the excise rate and v is the VAT.



The following measure is currently applied to cement and steel bars as a means of controlling the price of goods:

- *Price Control Measures:* Price surveillance and regulation are ruled by the Prime Minister's Decree No. 207/PM of 11 October 2001 which allows the Ministry of Industry and Commerce (MOIC) to do so for goods in general. Price controls apply to domestically produced steel for construction and cement.

4.2 Measuring Non-Tariff Barriers

Non-tariff measures include any policy measure beyond tariffs that induce policy distortions at the border. Measurement of the ad valorem tariff equivalent of non-tariff measures consists of calculating the so-called price wedge between the border price equivalent of a product and its domestic price equivalent, net of the tariff on that product. In practice, the c.i.f. price plus customs charges and other costs, measured in local currency, are used to determine the border price equivalent, which is then compared with the domestic wholesale price to calculate the price wedge.³⁶ The international market price should reflect the border price, which requires the inclusion of cost, insurance and freight (c.i.f.) for imported goods.³⁷ Import duties and excise taxes are excluded because they do not constitute a change in resources available to the consumer, and are simply transfer payments from foreign suppliers to the government.

Annex A shows the derivation of the ad valorem tariff equivalent of the non-tariff measures applied to cement and steel bars, as well as calculations of the nominal rates of assistance and consumer tax equivalent. The following are the noteworthy parts of the calculations:

Production and Distribution (Section 1): Based on available data, tradable inputs represent about 30 percent and 54 percent of cement and steel rod outputs respectively. Nearly two-thirds of cement usage in Laos originates from domestic sources, while two-thirds of steel rod usage originates from foreign suppliers.

Domestic Variables (Section 2): The domestic wholesale price for cement is 764,592 kip per ton and for steel rods it is 10,195,417 kip per ton. The turnover tax or VAT applied to both domestic producers and importers is 10 percent. There is no consumer tax or subsidy to either producers or consumers.

International Variables (Section 3): The c.i.f. import price for cement is US\$65 a ton and for steel bars it is US\$796 a ton. Perceptions about the quality of foreign products are somewhat higher than those for domestically produced goods and, as such, a factor of 1.1 has been assigned for cement and 1.2 for steel rods. Duty rates on cement and steel rods are 5 percent for the final products and, based on the effective rate of protection calculations discussed in the next section, the cost-based weighted average duty rate on inputs is 5.6 percent for cement and 5 percent for steel bars. Formal exchange controls on

³⁶ For applications of the methodology, see Kym Anderson and Alberto Valdes, "Distortions to Agricultural Incentives in Latin America". Washington, DC. World Bank, 2008; Montague Lord, "Trade Related Policies and Practices in Honduras". February 2001; and Kym Anderson and Will Martin, "Distortions to Agricultural Incentives in Asia". Washington, DC. World Bank, 2009.

³⁷ Note that c.i.f. includes the free on board (f.o.b.) cost at point of export, freight charges to point of import, insurance charges, unloading from ship to pier at port; it *excludes* import duties and subsidies, port charges at port of entry for taxes, handling, storage, and agents' fees. Free on board (f.o.b.) includes all charges to get goods on board at the harbour of the exporting country, local marketing and transportation costs, local port charges including taxes, storage, loading, fumigation, agents' fees, export taxes and subsidies, project boundary price.



the kip have been lifted and the gap between the official and 'parallel market' rates has been eliminated. The official exchange rate can therefore be considered to be the equilibrium exchange rate.³⁸

Price Margins (Section 4): According to industry data, the markup prices for domestic cement and steel are 4-5 percent.

Self-Sufficiency (Sections 5-6): Based on available data, the self-sufficiency index of Laos in cement is 42 percent and in steel bars it is 19 percent, where self-sufficiency is defined as the share of production in total supplies available for domestic use.

International Prices (Section 7): The undistorted international prices of cement and steel bars equal the c.i.f. import price denominated in US dollars, adjusted for consumer perceptions about the quality of the foreign-sourced products and converted to kip. For exportables, the f.o.b. export price is used, with the same adjustments as in the case of imports.

Nominal Rate of Assistance and Consumer Tax Equivalent (Sections 8 and 9): The nominal rate of assistance (NRA) to producers is defined as the percentage by which government policies have raised gross returns to producers above what they would be without the government's intervention.³⁹ The consumer tax equivalent (CTE) is the percentage increase in the price paid by consumers as a result of the government policies. In the case of both cement and steel, the difference between the domestic price and border price resulting from the policy distortions at the border are adjusted by the turnover tax or VAT since the importer is also subject to that tax. For the CTE, the turnover tax or VAT is not included, so the tax equivalent for the consumer is the additional price that he or she must pay for the domestic good over and above what would have been paid at the undistorted international price.

Tariff Equivalent of Non-Tariff Measures (Sections 10 and 11): Non-tariff measures from policies extending beyond tariffs that induce policy distortions at the border exclude the turnover tax or since both domestic producers and importers are subject to the tax. They do, of course, exclude direct duty rates so the rates applicable to cement and steel are subtracted from the measured price wedge between the border price equivalent of cement and steel and their domestic price equivalents. The calculated ad valorem tariff equivalent of cement is nearly 11 percent and that for steel bars is 12 percent. Overall, in cement NTBs account for about two-thirds of the total ad valorem tariff equivalent of both tariffs and NTBs to trade, and tariffs account for the remaining one-third. In steel, NTBs account for about 70 of the total ad valorem tariff equivalent of both tariffs and NTBs to trade, and tariffs account for the remaining 30 percent.

4.3 Effective Rates of Protection

While the tariff on beer, cement and steel iron imports protects domestic producers, tariffs

³⁸ Note, however, that an equilibrium exchange rate can also be considered to be the rate at which the trade or overall balance of payments for the country is in equilibrium. For the methodology on how to calculate the equilibrium exchange rate and its application to Vietnam, see Montague Lord, "A Balance of Payments Model for Vietnam". Manila, Asian Development Bank, 1998.

³⁹ In this section, we follow the simplified definition for the ERA used by Kym Anderson and Will Martin, "Distortions to Agricultural Incentives in Asia". Washington, DC. World Bank, 2009. It does not take into account each products value added. The interested reader can use the calculations in the section that follows on the effective rates of protection for the industries, where value added calculations are provided for the industries.



on inputs used in their production reduce the competitiveness of the domestic industry. The effective rate of protection (ERP) measures these effects by considering tariffs applied to imports of raw materials and intermediate goods that affect the price of the final good.⁴⁰ In particular, the ERP measures how tariffs on a product and its tradable inputs jointly affect the value-added of a particular activity. When only the nominal rate of protection (NRP) is calculated, the tariff on beer, cement and steel rod imports suggests that domestic production will be encouraged to increase their output. However, whether they increase their output depends not only on the tariff on the products' imports, but on the tariffs applied to inputs used in their manufacture. While domestic producers are given an implicit subsidy on their production when there are tariffs on competing imports, they also face a tax on their imported inputs, which can neutralize the effect of the implicit subsidy. The ERP therefore measures the net protection on the beer, cement and steel production processes, rather than simply the gross protection on the industry's output. Annex B provides details of the way that ERPs for the selected industries have been calculated. In this section, we report on the results of those calculations.

The ERPs for the cement and steel bar industries of Lao show that the tariffs have had a fairly neutral impact on the industries. For cement it is 9.5 percent and for steel bars it is 6.5 percent. The fact that they are positive reflects the absence of tariffs on non-tradables, rather than a positive differential between the tariffs on outputs and those on inputs. This phenomenon can be readily appreciated by the fact that the tariff on steel bars is 5 percent and all the tariffs on tradable inputs for that industry are also 5 percent. In the case of cement, the tariff on the product is also 5 percent, while the tariffs on tradable inputs range from 5 to 20 percent. However, the input cost-weighted average of those tariffs is 7 percent, that is, fairly close to the amount of protection given to the final product.

By itself, the ERPs provide limited information about the amount of protection afforded the industry. Although the results show that the amount of protection has been fairly neutral for both industries, the more interesting question is how that protection compares with that given by other countries to those same industries. Table 4.4 shows that comparative ERPs for cement and steel bars in the ASEAN member countries, using the same cost of production structures but applying the actual tariffs on the product outputs and tradable inputs of those industries in each country. In the case of cement, three countries have significantly higher ERPs than Laos. Vietnam in particular protects its cement industry to a far greater degree than Cambodia and Thailand, though the latter two countries have higher rates of protection on the industry than Laos. The implication of this comparative analysis for the cement industry is that Laos

Table 4.4: Comparative Effective Rates of Protection in Cement and Steel Bar Industries

	Cement	Steel
Brunei	0.0%	0.0%
Cambodia	58.5%	14.0%
Indonesia	-5.3%	26.2%
Lao PDR	9.5%	6.5%
Malaysia	-5.2%	45.3%
Myanmar	1.7%	1.6%
Philippines	na	na
Singapore	0.0%	0.0%
Thailand	38.2%	13.2%
Vietnam	648.6%	25.9%

⁴⁰ The effective rate of protection (ERP) measures how tariffs on a product and its tradable inputs jointly affect the value-added of a particular activity. When only the nominal rate of protection (NRP) is calculated, the imposition of a tariff on an imported good suggests that domestic producers of that product will be encouraged to increase their output. However, whether they increase output depends not only on the tariff on the import, but on the tariffs applied to inputs used in their production processes. While domestic producers are given an implicit subsidy on their production when there are tariffs on competing imports, they also face a tax on their imported inputs, which can neutralize the effect of the implicit subsidy. The ERP therefore measures the net protection on the production processes, rather than simply the gross protection on an industry's output.



could adopt more protective tariff measures for the industry and still be in line with other ASEAN countries that are WTO members. In the case of steel, five countries protect their industries to a significantly greater extent than Laos. Malaysia, in particular, has a much higher degree of protection than the other countries, though Vietnam, Indonesia, Cambodia and Thailand all protect their industries more than Laos. Like cement, the comparative analysis points to the fact that Laos could use more protective tariff measures and still be in line with other ASEAN countries that are WTO members. However, it is important to emphasize that these results refer to the protection given to the industries through tariffs and exclude non-tariff measures.

4.4 Total Protection Given to Selected Industries

Table 4.5 summarizes the ad valorem tariff equivalents (TEs) of the selected industries. Under the present regime, beer receives the highest level of protection (110%), followed by steel bars (17%) and cement (16%). The actual level of effective rate of protection (ERP) with the existing tariffs and TEs of the non-tariff measures is 62 percent for cement and 50 percent for steel bars. Lowering the existing tariffs to zero on tradable inputs in the cement and steel bar industries would increase the ERP on those industries to 84 percent for cement and 67 percent for steel bars. It would also create greater transparency, streamline administrative and bureaucratic procedures, and facilitate business practices in the country.

Table 4.5: Tariffs and Ad Valorem Tariff Equivalent of NTBs in Selected Industries, Applied to ERP Estimates

		Beer	Cement	Steel Bars
Tariff		40%	5%	5%
Excise Tax		50%	0%	0%
Tariff + Excise Tax 1/		110%	5%	5%
Non-tariff barriers to trade		0%	11%	12%
Total Ad Valorem Tariff Equivalent		110%	16%	17%
Effective Rates of Protection with Tariff and Ad Valorem Tariffs Equivalents of NTBs	With Existing Duties on Tradable Inputs	na	62%	50%
	With Zero (0) Duties on Tradable Inputs	na	84%	67%

1/ Calculated as $t + (1+t)e$, where t=tariff and e=excise tax.



5. Impact of WTO Accession on Selected Industries

5.1 Overview of Benefits and Costs of Accession

There are currently 153 members of the WTO and, except for Lao PDR, all ASEAN member countries have acceded to the WTO. While the accession experiences of countries vary greatly, the effects generally refer to two broad areas: first, the impact of accession on the legal and regulatory framework governing the economy and, second, the impact of accession on trade in goods and services and other key macro-economic variables affecting business activity and government revenue. The distinctive effects on business and government activity are notable.

- For the government, the immediate impact can be a reduction in trade tax revenue that accompanies commitments to lower taxes, although the transmission effects of liberalization normally create dynamic gains for government revenue over the medium term. From a legal and regulatory perspective, the WTO accession process strengthens domestic policies and institutions for the conduct of international trade in both goods and services.
- For the private sector, the WTO accession process improves the ease and security of market access to major export markets, and it provides access to a dispute settlement mechanism for trade issues. Without WTO membership, most-favored-nation (MFN) treatment is granted on a voluntary basis by WTO trading partners. There is evidence that the incidence of anti-dumping actions is much higher against non-WTO members than against members.⁴¹

Much of the empirical evidence on the impact of WTO accession has focused on the magnitude of trade changes associated with membership. Initial estimates of the impact of the Uruguay Round produced global gains worth \$500 billion annually from trade liberalization and the OECD estimated that agricultural trade liberalization would generate an additional trade of \$200 billion annually.⁴² But actual commitments from member countries fell short of expectations and the gains were accordingly reduced. Differences among estimates are often due to two major modeling approaches. Some computable general equilibrium (CGE) models assume that products are differentiated both across firms and countries so competition among firms is imperfect, while others assume that products within the same product category produced domestically are homogeneous, while products originating in different countries are imperfectly substitutable.⁴³ Additionally, some models hold capital stock fixed (static models), while other models allow for capital accumulation in response to changes in investment, which tends to generate larger overall effects than those where capital is fixed. More recent estimates based on simulations of the Doha negotiations show overall welfare gains from multilateral trade liberalization in the Doha negotiations, so the models are unambiguously clear that multilateral trade

⁴¹ Constantine Michalopoulos, "WTO Accession". World Bank, 2001.

⁴² For an assessment of the Uruguay Round estimates, see also J. Francois, "Assessing the Results of General Equilibrium Studies of Multilateral Trade Negotiations". Policy Issues in International Trade and Commodities Study Series 3, United Nation Conference on Trade and Development, Geneva: UNCTAD, 2000, and J. Whalley, "What Can the Developing Countries Infer from the Uruguay Round Models for Future Negotiations". Policy Issues in International Trade and Commodities Study Series 4, United Nation Conference on Trade and Development, Geneva: UNCTAD, 2000.

⁴³ The assumption that products originating in different countries are imperfectly substitutable requires the estimate of so-called Armington elasticities, that is, trade substitution elasticities.



liberalization would bring global benefits.⁴⁴ Conflicting results have been reported in a prominent study using a gravity model for a large sample of countries that yielded surprisingly robust estimates.⁴⁵ The model, however, failed to distinguish between country asymmetries and other studies have shown that liberalization does promote trade, but unevenly across industries, sectors and countries.⁴⁶

The more productive approach to examining comparative experiences is therefore based on country and sector or industry-specific empirical studies of trade liberalization.⁴⁷ Often these studies find a strong positive and significant effect of WTO membership on the formation of trade relationships and on the volume of a country's trade. Nonetheless, recent country-based estimates of the impact of liberalization and WTO accession on trade vary greatly because of the differences in national experiences.⁴⁸

Given the experiences of other countries, what then are the lessons for Lao PDR? A succinct though possibly incomplete list of conditions emerging from WTO membership for Laos is the following: (a) the establishment of a most-favorable-regime policy resulting in a level playing field for all member countries; (b) the creation of a national regime policy preventing discrimination between imported and local goods and services; (c) the shift of trade controls to tariff-based measures; (d) the achievement of openness and transparency in trade policy; (e) the maintenance of internal markets that are consistent with WTO rules; (f) the creation of favorable conditions for businesses to operate by reducing the costs of their doing business; and (g) the creation of a formal mechanisms for settling trade disputes.

We can summarize these effects for Laos into the following three categories: (1) the strengthening of domestic policies and institutions for the conduct of international trade in both goods and services; (b) improvements in the ease and security of market access to

⁴⁴ See K. Anderson, W. Martin and Van Der Mensbrugge, "Market and Welfare Implications of the Doha Reform Scenarios", In *Agricultural Trade Reform and the Doha Development Agenda*, edited by K. Anderson and W. Martin, Washington D.C.: World Bank, 2005; and J. Francois, H. Van Meijl, and F. Van Tongeren, "Trade Liberalization and Developing Countries under the Doha Round". CEPR Discussion Paper No. 4032, 2003.

⁴⁵ A. K. Rose, "Do We Really Know that the WTO Increases Trade?". *American Economic Review* 94, 1: 98-114, 2003.

⁴⁶ A. Subramanian and S.J. Wei, "The WTO Promotes Trade: Strongly but Unevenly". NBER Working Paper No. 10024, 2003.

⁴⁷ For Laos, it is useful to examine a country that had undergone the accession process and shared some of its characteristics. The case of Cambodia's successful recent WTO accession has been examined thoroughly in Sok Simana's report "Cambodia and WTO" (Asian Development Bank Institute, 2005) and the negotiating process is used extensively as an illustration for other countries. Like Laos, the market size of Cambodia is relatively small (12 million consumers versus 6.8 million in Laos) and about one-third percent of the population of both countries are living below the poverty line. Cambodia has access to the markets of its ASEAN neighbors, as does Laos, but neighboring countries often produce products that are similar to one another, thereby creating trading limitations. For that reason Cambodia found it necessary to look at the world market as a whole to find better comparative advantages for its products, especially in the EU and US markets. Cambodia and Lao PDR are agriculture-based economies, with 75 to 85 percent of their labor force employed in the agricultural sector. Finally, both Lao PDR and Cambodia are receiving special privileges as least developed countries (LDCs).

⁴⁸ For example, one study found that Ecuador's manufacturing imports fell after its WTO accession in 1996. However, this apparently surprising finding is easy to understand when one observes that Ecuador raised its applied tariffs across the board in the years after WTO accession, something that was possible in view of the binding overhang of its WTO tariff commitments. See M. Kennett, S.J. Evenett, and J. Gage, "Evaluating WTO Accessions: Legal and Economic Perspectives", 2005.



major export markets; and (c) access to a dispute settlement mechanism for trade issues. The results support a number of fundamental objectives established by the Government in its NSEDP 2006-2010. First, it supports the Government's aim to further integrate the country into the world economy by providing greater exports through more predictable access to foreign markets, which WTO membership provides. Second, WTO membership tends to attract more foreign direct investments and greater foreign business involvement with the country. Thirdly, for transition economies like Laos, WTO membership signals a commitment towards a market-based economy since accession facilitates the reform process. For Laos, therefore, WTO accession can improve important components of the national business environment which, in turn, has sizeable domestic payoffs.

5.1.1. Benefits of Liberalization

One way to consider a trade liberalization program is to consider the cost of not undertaking reforms. The forgone benefits can be divided into the following key indicators used as benchmarks for Lao PDR's medium-term development strategy:

Economic Growth – Countries that have undertaken reforms to liberalize and streamline trade have grown faster than those that have not.⁴⁹ Higher growth rates result from static gains associated with an improved allocation of resources in the tradable and non-tradable sectors, and from dynamic gains resulting from greater access to technology and knowhow that allow producers in Laos to move closer to the international technological frontier.

Private Sector Development – In designing its WTO negotiating strategy, it is important that the Government distinguish between its direct revenue-generating interests and the private sector's profit maximization objectives. The revenue-generating effects of tariff reductions are negative in the short run but likely to be positive in the medium to long run as the overall volume of trade increases. In contrast, the private sector will benefit from lower prices for inputs and the more efficient allocation of resources for those activities in the tradable and non-tradable sectors.

Consumer Gains – Consumer gains from lower prices in previously protected industries are one of the greatest, yet often unrecognized benefits of trade liberalization. They usually go unnoticed because, unlike producer groups that are concentrated and often well-organized, consumers are numerous and lack organizational capabilities. Lao PDR's poor households that could benefit from cheaper construction materials like cement and steel are the most underrepresented segment of the economy, notwithstanding their large numbers.

Employment Generation – Higher output growth in competitive sectors and the reallocation of resources into labor-intensive activities where Laos has a comparative advantage would give rise to higher rates of labor utilization. With liberalization, employment would increase in competitive industries producing domestic and export-oriented goods like processed fruits and vegetables, and decrease in inefficient but protected import-competing industries.

Poverty Alleviation – Openness to trade has been shown to be pro-poor, raising the mean income of the poor and improving the distribution of income. The Government's emphasis

⁴⁹ Recent evidence based on multi-country studies showing robust positive effects of trade liberalization on growth, openness and investment rates include Wacziarg, R., and K.H. Welch, "Trade Liberalization and Growth: New Evidence". NBER Working Paper Series No. 10152, December 2003, and references therein.



on economic growth as a strategy for alleviating poverty is founded on the large and growing empirical evidence showing that sustainable economic growth rates successfully lower poverty levels.⁵⁰ Lao PDR's growth elasticity of poverty is currently estimated at 0.5.⁵¹ However, less than half of that elasticity is explained by inequality changes, indicating that economic policies have been pro-poor neutral and suggesting that poverty alleviation that relies on economic growth alone is ineffective.⁵² Instead, government policies and programs that lowered inequality could significantly reduce the magnitude of poverty in an effort to achieve its Millennium Development Goal to halve poverty by one-half by 2015. Pro-poor trade policies aimed at opening the economy could support that process.

5.1.2. Costs of Liberalization

There are, of course, costs associated with trade liberalization. First, protected industries like those of cement and steel would be subject to increased competition from imported goods. The resulting contraction in non-competitive import-substituting industries, however, would be offset by an overall increase in exports associated with the reduction of the bias against exports using imported inputs that were previously subject to significant duties and processing costs. Offsetting movements between these industries are unlikely to occur simultaneously and a period of transition would probably occur, during which time the contraction in output in the import-competing industries could exceed the increase in output of efficient export-oriented industries. Output losses could therefore occur in the short run, although past experience of countries liberalizing their imports show that a net increase in output tends to occur in the medium term and the amount of the net increase is usually large.

A second cost of adjustment that can parallel output losses relates to employment shifts. Evidence from other countries nonetheless suggests that employment adjustment costs are small. In the case of Laos the beer, cement and steel industries represent a relatively small proportion of Lao PDR's total output, and employment shifts would represent a small proportion of overall employment adjustments in the economy. Sector specific adjustments would therefore be small, and much of the adjustments would be absorbed by normal turnover rates that occur over a two to three year period.⁵³

A third cost to be considered is the loss of tariff revenues as tariff rates are reduced. The likely reduction in tariff revenues for Laos is probably not substantial since tariff revenue from the three industries is currently small. Compared with the gains from import liberalization for the tradable and non-tradable sectors, the revenue losses are unlikely to be significant in the medium term. Finally, as mentioned in the previous section, there is a

⁵⁰ For example, studies carried out for a cross-section of countries by Dollar and Kraay (2000), Chen and Ravallion (2000), Gallup et al. (1998) and Lundberg and Squire (2000) have demonstrated that, on average, economic growth at the national level leads to a proportional growth in the incomes of the poor within those countries.

⁵¹ Ginalyn Komoto and Susan Stone, "Determining Poverty Impacts on Lao People's Democratic Republic and Cambodia: Reconciling Household and GTAP Data". ADBI Working Paper Series, No. 141, July 2009.

⁵² Nanak Kakwani and Ernesto M. Pernia, "Pro-Poor Growth and Income Inequality". Asian Development Bank, October 2000.

⁵³ Unfortunately there are few empirical studies on employment-related effects from WTO accession since most studies have focused on trade and output shift without addressing the labor market. An exception is the study on Azerbaijan's WTO accession by M. Lord and V. Ahmadov, "Azerbaijan's WTO Accession Process and Its Potential Impact on Vulnerable Non-Competitive Segments of the Economy". Prepared for USAID/Azerbaijan. Baku, October 2008.



distributional effect between the public and private sectors. Short-term revenue losses for the Government would not translate to a general welfare loss if the public expenditure that had to be cut to accommodate the revenue loss had a smaller rate of return than that of the private sector.

5.2 Reform Strategies

As part of Lao PDR's accession to the WTO, the accession working party will likely attach a number of annexes to the protocol that are legally binding and address specific issues related to Lao PDR's trade regime. As with all other accessions, the annexes will have been the focus of the ongoing negotiations and will provide WTO members with guarantees that the reforms or other transitional measures promised by Laos will actually be implemented. As such, they will represent a kind of a negotiated timetable for bringing Lao PDR's trade regime into full conformity with the WTO's rules and obligations.

As part of those negotiations, Lao PDR is likely to undertake specific reforms of its trade regime covering tariff and non-tariff measures impacting on the selected industries covered by this study. Those reforms will undoubtedly be made in the context of the broader trade strategy of the Government, but in this section we limit the analysis of alternative reforms proposed to the three selected industries. As such, this section assesses the implications of different scenarios of tariff reforms as part of the WTO accession process on various performance indicators, including those related to the industry, government tax revenue, and employment effects.

In particular, we consider the transformation of non-tariff measures to ad valorem tariff equivalents, and the application of alternative tariff reform strategies on the beer, cement and steel bar industries. Alternative tariff structures and their associated effects on output and trade tax revenue are jointly assessed for the selected industries in an effort to identify common policy prescriptions for reforms. The current estimates provide for tariffication of non-tariff measures and the application of both the existing ad valorem tariff and tariff equivalent rates of NTBs to be applied to the three industries.

Free trade is used as the benchmark against which two of the most commonly applied reform strategies are measured:

- *Free Trade*: In the absence of any protection, all tariffs would be zero and so the NRPs and the ERPs would also be zero.

The following two tariff structures are commonly invoked when reforming trade regimes:

- *Tariff Escalation*. This strategy provides for tariff rate increases with the stage of processing of a product. It promotes infant industries and those industries with export potential by allowing their inputs to be taxed at a lower rate than competing finished products.
- *Uniform Tariff*. A single tariff on both inputs and outputs would afford some degree of effective protection since non-tradables have a zero implicit tariff burden.

As a transition mechanism, two other reform strategies can be considered that support a transition to a uniform tariff:

- *Combination of Multi-tier Strategy with Uniform Tariff*. This combination affords domestic industries transitional protection while moving towards a uniform tariff.
- *Combination of Concertina Method with Multi-tier or Uniform Tariff Strategies*. The concertina method aims to gradually reduce individual tariffs from their highest level to their next lowest level. It is often used to move towards the implementation of a uniform tariff, but can also be used with a multi-tier tariff strategy.



5.3 Impact of Reforms on Effective Rates of Protection

Effective rates of protection (ERP) would increase considerably if a multi-tier tariff structure were applied to tariffs and the ad valorem tariff equivalents of non-tariff measures in the cement and steel bar industries.

With a multi-tiered system that applied the actual tariff plus tariff equivalent (TE) of NTBs, the ERP for cement would increase from its existing level of 62 percent to 84 percent; for steel bars it would increase from 50 percent to 67 percent. In contrast, the use of a uniform tariff that applied the same tariffs plus TEs to both outputs and inputs would lower the ERPs to 46 percent for cement and 23 percent for steel bars. Even though the tariffs on inputs and outputs are the same under a uniform tariff, the ERP is positive since input tariffs only

cover a portion of total production costs, the remaining costs being attributable to non-tradables.⁵⁴ The implication of these findings is that protection of the cement and steel bar industries is more effective under a multi-tier system in which tariffs on tradable inputs are eliminated and the ad valorem equivalent tariff is applied to existing non-tariff measures.

Table 5.1: Effective Rates of Protection of Tariff Reforms with Ad Valorem Tariff Equivalents of NTBs

		NRP on Outputs	NRP on Inputs	Effective Rate of Protection (ERP)
Beer	Tariff Escalation	110%	0%	na
	Uniform Tariff	110%	110%	na
Cement ^{1/}	Tariff Escalation	16%	0%	84%
	Uniform Tariff	16%	16%	46%
Steel Bars ^{1/}	Tariff Escalation	17%	0%	67%
	Uniform Tariff	17%	17%	23%

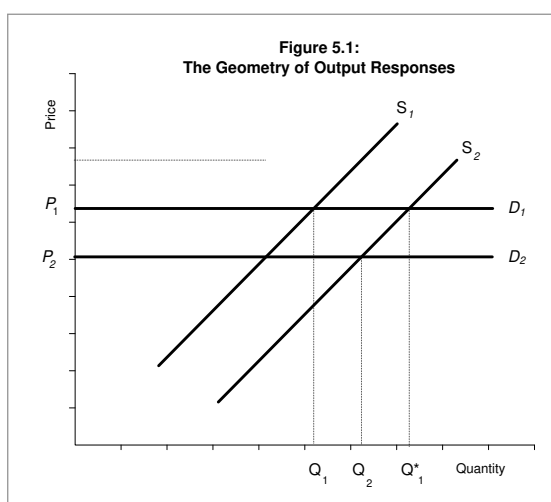
1/ Assumes that non-tariff measures are converted to tariff equivalents

Note: NRP denotes nominal rate of protection

5.4 Impact of Reforms on Production

The estimates of effective rates of protection for the cement and steel industries are suggestive of whether different tariff structures will more or less favor or threaten their activities. They are indicative of the potential direction of change in resource pull than of the output magnitudes involved. Predicting the quantitative impact of liberalization requires supply-side analysis, for which we begin with a graphic illustration of the impact of the trade liberalization on any of the selected industries.

Our approach assumes constant non-tradable factor prices associated with tariff changes, and so it is legitimate only to the extent that this situation is approximately the case. In reality, a significant restructuring of relative output prices would lead to changes in the demand for such non-traded factors, i.e., land, labor, and capital, and so to changes in the factor prices. Tradable inputs prices are assumed



⁵⁴ Data on production costs of the beer industry were not available and, consequently, ERP were unable to be calculated for that industry.



fixed on world markets, and domestic prices of these inputs therefore depend only on changes in the input tariff rates. This maintained assumption of fixed non-traded factor prices in Laos following reforms in the trade regime can be viewed as roughly legitimate since overall outputs of the beer, cement and steel industries are not dominant in the economy.

The approach used to estimate the impact of trade reform on the selected industries is illustrated in Figure 5.1, which represents an industry supply curve diagram with initial price and quantity supplied given by P_1 and Q_1 . When tariffs are changed on inputs and output simultaneously, two forces are at work in the industry. First, a change in the input tariffs will alter costs and so shift the supply curve up or down depending on whether unit costs have increased or decreased due to the tariff changes. Suppose that the tariffs on inputs are lowered, causing unit costs of production to fall and the supply curve to shift downward to S_2 . For export-oriented industries like part of the beer industry in Laos, the output price remains at the initial level P_1 , and output expands to Q_1^* by an amount dependent upon the magnitude of the cost reduction and the price elasticity of supply. In the case of import-substitution industries, however, the output price is also altered by tariff elimination on the final product, so that there is an additional adjustment represented by a movement along the new supply curve. In the present diagram, it is assumed that the output tariff is lowered so that price falls to P_2 , inducing a new equilibrium price and quantity at P_2 and Q_2 , the quantity change depending again on the magnitude of the output price change and the supply elasticity. Clearly, even if all tariffs are reduced, output may rise or fall. The net effect of tariff reforms on output and employment at the industry level is therefore an empirical issue.

Table 5.2: Estimated Long-Term Price and Income Elasticities of Selected Industries

		Beer	Cement	Steel Bars
Price Elasticity	Production	0.24	0.73	0.69
	Import Demand	-2.57	-0.73	-0.31
Income Elasticity	Production	3.27	1.79	1.13
	Import Demand	3.02	0.30	0.59

Source: Estimates based on distributed lag equations. Estimates of domestic output supply based on 2001-2008 data; those of import demand based on 1990-2008 data, except in the case of beer, for which 2001-2008 data were used. Details of the estimates are available from the author on request.

In order to calculate the effects of tariff reforms, we first estimated the industry supply elasticities using a distributed lag model.⁵⁵ The price and income elasticities are reported in Table 5.2. The average elasticities of price and income are 0.8 and

2.1 respectively. However, there are considerable variations among the industry products. Cement is most responsive to price variation, followed closely by beer. Steel bar production is price inelastic. Shifts in the supply curves associated with input tariff changes are calculated as the change in input tariffs weighted by each input's total non-factor costs. Movements along the new supply curve resulting from output tariff changes and cost-change induced equilibrating changes are then calculated using the elasticity estimates. For import-substituting industries, both cost-induced supply-adjustments and price-induced changes in output are calculated, whereas only cost-induced supply adjustments are estimated for export-oriented activities of the beer industry, since it does not benefit from the protected domestic market.

⁵⁵ The supply relationship for production, Q , with independent variables price, P , and domestic income, Y , is $\ln Q_t = \alpha_{30} + \alpha_{31} \ln Q_{t-1} + \alpha_{32} \ln P_t + \alpha_{33} \ln Y_t + \mu_3$. The expected signs are $0 < \alpha_{31} < 1$; $\alpha_{32}, \alpha_{33} > 0$.


Table 5.3: Industrial Production Shift-Analysis of Alternative Tariff Structures Relative to Free Trade

	Class	Tariff Reform	Base Value	Percent Change			Change in Value	Percent Change in Value	
			Mil.Kip	Cost	Qty1	Price			Qty2
Beer	Import-Sub	Uniform Tariff	601	110.0%	-13.2%	110.0%	26.4%	79.2	13.2%
		Two-Tier Tariff	601	0.0%	0.0%	110.0%	26.4%	158.5	26.4%
	Export-Oriented	Uniform Tariff	2	110.0%	-13.2%	0.0%	0.0%	-0.3	-13.2%
		Two-Tier Tariff	2	0.0%	0.0%	0.0%	0.0%	0.0	0.0%
Cement	Import-Sub	Uniform Tariff	636	15.8%	-3.4%	15.8%	11.4%	51.1	8.0%
		Two-Tier Tariff	636	0.0%	0.0%	15.8%	11.4%	72.7	11.4%
Steel Bars	Import-Sub	Uniform Tariff	243	17.1%	-6.3%	17.1%	11.8%	13.3	5.5%
		Two-Tier Tariff	243	0.0%	0.0%	17.1%	11.8%	28.6	11.8%

Source: Calculations based on estimated elasticities in Table 5.2, and cost of production data in Annex B. For beer, where cost of production data are not available, it is assumed that half of the non-factor costs are from tradable products. Also for beer, the base value for import-substitution is equal to production minus exports; for export-oriented activities the base value is the current amount of exports. For the construction industry, the base value is equal to production since all output is destined to the domestic market.

Table 5.3 illustrates the effects that tariff and NTB reforms would have on Laos' output for the selected industries. The calculations show the effects of different tariff structures on the industries *relative to a free-trade situation*. In a later section, we compare these tariff structures relative to existing NTBs and tariffs. For import-substituting activities, the reforms would generally expand the value of domestic production by 13 percent. A uniform tariff equal to the existing tariff and ad valorem tariff equivalents of NTBs applied across the board to both inputs and outputs would increase production by 9 percent, whereas a tiered tariff system with the same tariff equivalents on outputs but a zero (0) tariff on inputs would increase output by 17 percent since the output price rises would increase the quantity supplied by that same amount without inducing any shifts in supply caused by a cost increase. For the portion of beer that is exported, a graduated tariff system would not have any effect on exports since the producer would not receive protection in the output market, that is, the international market, while input prices would be free of duties in the proposed scheme. In the case of a uniform tariff, however, the increased input prices would have a negative effect on production and output would contract significantly. The portion of beer production directed to the export market is currently low, so the change in value is small. Nonetheless, over time the impact could be much greater since the industry aims to expand its entry into niche foreign markets.

5.5 Impact of Reforms on Vulnerable Segments of the Economy

The vulnerable segments of an economy facing a potentially negative impact from trade liberalization can be classified into the following three broad segments:

- Import substituting industries that are protected by high tariffs and non-tariff barriers (NTBs) to trade, especially those whose production is dominated by micro, small and medium size enterprises (MSMEs);
- The poor who are susceptible both to (a) price-related changes in the goods that they produce and consume, and (b) government support programs for the poorest members of society, financed in whole or in part by trade tax revenues; and
- Non-tradables industries that depend on imported inputs and compete with tradable industries for labor.

Protection of the beer, cement and steel bar industries will raise the ad valorem tariff or its tariff equivalent and therefore the price of imported products for those industries. However,



the effect on wages and employment is more ambiguous. Trade reforms have been found to lead to substantial dynamic benefits to economies from direct price and market access benefits, as well as the greater investment in capital stocks and the reallocation of resources to reflect a country's comparative advantage because of efficiency gains from increased competition.⁵⁶ Economic growth has in turn been shown to successfully lower poverty levels.⁵⁷ However, the findings refer to the average of developing countries, and individual experience can differ substantially.⁵⁸ For Lao PDR's import-competing industries, post-border price rises from protective trade taxes can trigger a substantial reallocation of resources between sectors of the economy.⁵⁹

For the poor the traditional link with international trade is through the labor market. However, the brewery sector is not a labor-intensive activity, and the neither steel nor cement industry is the labor-intensive industry it used to be. Nonetheless, being basic industries, steel and cement generate substantial growth of both upstream and downstream facilities. According to some estimates one person-year of employment in the steel industry generates 3.5 person-years of employment elsewhere.⁶⁰ For Lao PDR, the opening of the economy to international trade could increase the demand for labor and allows the economy to export more labor-intensive goods and replace local production of capital and skill-intensive goods with imported goods.⁶¹ If poverty is concentrated among people who are actually or potentially part of the labor market, increasing demand will help to alleviate poverty. But how and whether it does so depend significantly on how the labor market operates.

For non-tradable activities, lower tradable input costs can create a more competitive situation for the selected industries. The net welfare effect, however, will depend on the extent to which prices on final goods and services respond to changes in tradable inputs. To the extent that prices of the final products respond to lower input costs, then consumer welfare gains will be positive. If, in contrast, prices are downward sticky, then there will be neither a change in consumer welfare nor any changes in income and expenditures of households. The results for wages and employment suggest that employment will increase if prices of non-tradables fall and household expenditures on those products increase, and

⁵⁶ See, for example, Harrison, G.W., T.F. Rutherford and D.G. Tarr (1996), 'Quantifying the Uruguay Round', in *The Uruguay Round and the Developing Countries*, edited by W. Martin and L.A. Winters, Cambridge: Cambridge University Press.

⁵⁷ For example, studies carried out for a cross-section of countries by Dollar and Kraay (2000), Chen and Ravallion (2000), Gallup et al. (1998) and Lundberg and Squire (2000) have demonstrated that, on average, economic growth at the national level leads to a proportional growth in the incomes of the poor within those countries.

⁵⁸ See M. Lubker, G. Smith, and J. Weeks, "Growth and the Poor: A Comment on Dollar and Kraay". *Journal of International Development*. 14, 555–571 (2002). Available: <http://siteresources.worldbank.org/DEC/Resources/LubkerSmithWeeks.pdf>.

⁵⁹ Arguments for 'tariff hoping' by foreign direct investment (FDI) aimed at avoiding trade taxes have been shown to fail because outward-oriented strategies have been shown to be more successful. Empirically, FDI is relatively more elastic with respect to demand for exports than with respect to aggregate domestic demand. See H. Singh and K.W. Jun, "Some New Evidence on Determinants of Foreign Direct Investment in Developing Countries". Unpublished, 2004.

⁶⁰ International Iron and Steel Institute, "World Steel in Figures". Washington, DC, 2006.

⁶¹ UNDP, "International Trade and Human Development: Lao PDR 2006". National Human Development Report, Vientiane, 2006.



labor displacement from the non-competitive tradable sector will be absorbed by the non-tradable industries.

In the present analysis, the employment effects associated with the trade reform-induced adjustments in Lao PDR's beer, cement and steel bar industries assumes fixed labor-output coefficients in production. Hence, the same export-oriented activities of the beer industry are likely to contract in terms of employment utilization under a uniform tariff system since production costs rise but output prices remain unaffected in the international market. In contrast, the rate of employment generation for import-substituting industries in protected markets will be the same as the estimated change in output (Table 5.4).

Table 5.4: Industrial Employment Adjustments from Alternative Tariff Structures Relative to Free Trade

	Class	Tariff Reform	Change in Employment
Beer	Import-Sub	Uniform Tariff	13.2%
		Two-Tier Tariff	26.4%
	Export-Oriented	Uniform Tariff	-13.2%
		Two-Tier Tariff	0.0%
Cement	Import-Sub	Uniform Tariff	8.0%
		Two-Tier Tariff	11.4%
Steel Bars	Import-Sub	Uniform Tariff	5.5%
		Two-Tier Tariff	11.8%

Source: Calculated from estimates in Tables 5.2 and 5.3 based on the assumption of fixed input-output coefficients. In particular, the assumption of proportionality means that a one percent change in output will bring about a one percent change in employment. Hence, over the short to medium term, output and employment percentage changes are the same.

Beyond these numerical estimates, it is important to underscore the multi-dimensional effect of trade on human development. As noted in the UNDP's Human Development Report for Laos, improvements in human development and poverty reduction coincided with increases in trade.⁶² The relationships between trade and human development are complex, especially since trade can increase economic growth in different ways, for example, by expanding markets, disseminating information and knowledge, creating job opportunities and increasing incomes. Although the links are not always automatic, economic growth is necessary for human development and for a country like Laos where the domestic market is fairly small that growth can be driven by trade. As in the present study, the UNDP report also found that the potential benefits from trade in industrial and manufactured products were positive for employment, especially for women and remittances sent back to rural areas. It is therefore important to be aware of the multi-dimensional aspects that trade can bring to poverty alleviation and the necessity of using a holistic approach to policy-making when considering trade reforms.

5.6 Impact on Government Revenue

Table 5.5 shows the revenue gains from trade taxes on beer, cement and steel bar imports. Beer imports are subject to both an ad valorem tariff of 40 percent plus an excise tax of 50 percent. The combined effect of these taxes generates about US\$ 1.4 million in revenue. Both cement and steel bars apply duty rates of 5 percent, from which over US\$ 5 million in revenue is generated. The conversion of non-tariff measures to ad valorem tariffs would add another 11 and 12 percentage points to the duty rates on cement and steel bars. Trade tax revenue would not, however, rise by that full amount since the increase in trade taxes would reduce the volume of cement and steel rods imported. Trade taxes would be applied to smaller value of imports but it would nonetheless produce an additional US\$10.8 million in additional revenue. The conversion of non-tariff measures

⁶² UNDP, "International Trade and Human Development". National Human Development Report. Committee for Planning and Investment, National Statistics Centre (NSC), and United Nations Development Programme (UNDP), Lao PDR, 2006.



would also reduce the administrative costs of managing those non-tariff measures and free government officials to engage in other activities.

It is perhaps in the latter area that trade reforms could have their greatest impact since the costs of administering NTBs are considerably greater than the possible tax revenue benefits from converting those trade control measures to tariffs.

Budgetary limitations and capacity limitations in both the central and provincial governments should be considered as part of the decision-making process

leading to possible trade policy reforms. By freeing up administrative costs and human resources currently charged with monitoring and implementing trade control measures in the construction industry it would be possible to shift those resources to other productive areas aimed at facilitating business activity and enhancing the competitiveness of local businesses.

Table 5.5: Effect on Import Value and Trade Taxes of Tariff and NTB Reforms in Selected Industries

Industry	Trade Taxes Impact	Base Tax	New Trade Tax	Change in Trade Taxes	
				Value (1000US\$)	Percent
Beer	Revenue Gains from Existing Taxes	0%	110%	1,427	110%
Cement	Revenue Gains from Existing Taxes	0%	5%	2,416	5%
	Revenue Gains from Conversion of NTBs to Ad Valorem Tariffs	5%	16%	4,327	10%
Steel Bars	Revenue Gains from Existing Taxes	0%	5%	2,915	5%
	Revenue Gains from Conversion of NTBs to ad valorem Tariffs	5%	17%	6,511	12%

Source: Calculated from estimates in Tables 5.2 and 5.3 based on COMTRADE data in Annex C.



6. Recommendations on Tariff and Trade Strategies

6.1 Designing Trade Policy Reforms for Selected Industries

As a least-developed country (LDC), Lao PDR's application for membership in the WTO is covered by the 2002 General Council guidelines for accelerating membership negotiations.⁶³ Under those guidelines WTO Members are to exercise restraint in seeking concessions and commitments on trade in goods and services from acceding LDCs. Moreover, transitional periods and arrangements are provided under specific WTO Agreements to enable acceding LDCs to effectively implement commitments and obligations. These transitional provisions are to be granted in accession negotiations, taking into account individual development, financial and trade needs of Laos. However, it is also clear from the guidelines that the transitional periods and arrangements are to be accompanied by Action Plans for compliance with WTO rules, with the ultimate elimination of the transitional arrangements within a specified period of time.

6.2 Arguments for Protecting Selected Industries

Protection of the construction industry and, in large part, that of the brewery industry is largely based on the need for Laos to catch up in its transition to a market economy and therefore provide infant industry protection to those industries. That process has been envisioned under the WTO as it relates to LDCs and justifies protection during limited, time-bound period for certain industries. It recognizes that trade protection can affect the performance of domestic firms by influencing the competitive pressures that these firms face and the size of the market in which they operate. Article XVIII provides for wide ranging government actions to help protect and encourage infant industries, subject to reasonable requirements to consult and notify WTO members.

In practice, however, subsidies are likely to be more effective in promoting industries, as they did in the case of the Asian tigers, since unlike border protection they can be used to promote industries directly.⁶⁴ The problem is that restrictions imposed by the Agreement on Subsidy and Countervailing Measures (ASCM) prohibits the use of subsidies for non-agricultural goods under article 3 when those subsidies depend on export performance or the use of domestic over imported goods to be paid to firms. There is nonetheless the possibility that Laos could institute those subsidies before accession and thereby have the option of maintain those subsidies as a WTO member country.

6.3 Arguments for Liberalizing Selected Industries

The relatively high level of protection given to the beer, cement and steel industries in the forms of tariff and non-tariff measures are against the avowed economic goals the Government has resolved to achieve in the medium term under its Sixth National Socio-Economic Development Plan (2006-2010) under which exports are the main engine of growth for the economy. The reason is that continued protection of inefficient industries prevents the country from exploiting its comparative advantage for labor and resource-intensive manufactures since it leads to movement of resources away from such activities.

⁶³ World Trade Organization, "Accession of Least-Developed Countries". Document WT/L/508, 20 January 2003.

⁶⁴ World Bank, "The East Asian Miracle". Washington, DC, 1993.



Moreover, the presence of trade distortions causes investment to focus on non-competitive activities, causing returns to investment to decline over time and compromising future output growth. There is already evidence that private investment is being attracted to non-tradable, mainly in services, rather than the tradable sectors. For example, in 2007 the value of approved foreign investments directed to hotels and restaurants, banking and insurance, trading activities, consultancies and other services represented one-fourth of all approved foreign investments. In contrast, a decade earlier, in 1997, those same service industries represented only 2 percent of all foreign investments into the country.⁶⁵ Finally, interest groups that have invested in activities that are not internationally competitive will resist reforms, creating a lobby against future reforms because the value of their invested capital would decline with greater external competition.

The dispersion in tariffs equivalents afforded to beer, cement and steel interferes with the optimal allocation of the country's resources, since the relative returns to activities are not determined by comparative advantage but rather by the differences in protection rates arising from the differential in tariffs. The higher the dispersion of tariffs, the higher is the deviation of activities from their most efficient use. In fact, the large differential in tariffs between the selected industries and others in the economy like footwear, headgear, rubber and plastics that have high growth potential is even more harmful than high protection in itself.⁶⁶ If all industries were protected to the same extent, then resource flows will be neutral among sectors, while the combination of high protection in a few industries and a wide dispersion in tariffs across industries will create impediments for the best use of resources.

The presence of high escalation in tariffs and tariff equivalents on non-tariff measures also discourage the growth of input producing industries. Laos has a comparative advantage in input-producing activities like wood for furniture-making, and minerals for light industries. When tariff escalation discriminates against these activities by providing them with low tariffs, entrepreneurs will favor the more protected downstream activities that may not have comparative advantages. Industrial development among successful developing countries has followed a pattern of movement from raw material and intermediate good production to the production of final goods, and tariff escalation can undermine efforts of countries like Laos to successfully industrialize.⁶⁷

6.4 Summary of Effects from Alternative Tariff Reform Strategies

Tariff reforms in the selected industries should, in principle, be considered in the context of the broader trade strategy of the Government. Nonetheless, the alternative reforms proposed below can be applied specifically to the three industries or across a broader spectrum of industries and sectors. We can assess the effects of four of the most commonly applied reform strategies relative to a benchmark of free trade.

- *Free Trade:* In the absence of any protection, all tariffs would be zero and so the NRPs and the ERPs would also be zero.

⁶⁵ Based on data from Ministry of Planning and Investment, reported in Department of Statistics, "Lao PDR: Statistical Yearbook, 2008", Vientiane, 2009, and P.J. Gunawardana and S. Sisombat, "Trends and Patterns of Foreign Direct Investment in Lao PDR". School of Applied Economics and Centre for Strategic Economic Studies, and Victoria Graduate School of Business, Victoria University, January 2008.

⁶⁶ World Bank, "Building Export Competitiveness in Laos: Background Report". November 2006.

⁶⁷ World Bank, "The East Asian Miracle". Washington, DC, 1993.



- *Multi-tiered Method.* This strategy represents a simple form of tariff escalation, which promotes infant industries and those industries with export potential by allowing their inputs to be taxed at a lower rate than competing finished products. If tariffication of non-tariff measures were to take place and the existing ad valorem tariff plus tariff equivalent rates were applied to the three industries, then the effective rates of protection would be over 100 percent for cement and nearly 60 percent for steel bars.
- *Uniform Tariff.* A single tariff on both inputs and outputs nonetheless affords some degree of effective protection since non-tradables have a zero implicit tariff burden. In the case of cement, the ERP is about half of its level in the multi-tiered method and, in the case of steel bars, the ERP is about one-third of the escalation approach.

As a transition mechanism, two other reform strategies can be considered that support a transition to a uniform tariff:

- *Combination of Multi-tier and Uniform Tariff Strategies.* This combination affords domestic industries transitional protection while moving towards a uniform tariff.
- *Combination of Concertina Method and Uniform Strategy.* The concertina method aims to gradually reduce individual tariffs from their highest level to their next lowest level, and is often used to move towards the implementation of a uniform tariff.

The results of the multi-tiered method and a uniform tariff approach are shown in Table 6.1. The tiered method provides a higher level of effective protection to the industries for which data were available, and the results are also likely to hold in the case of beer. It also increases production and employment and reduces import volumes by a larger amount than in the case of a uniform tariff. In terms of protection, the tiered method is therefore superior to the uniform tariff for the individual industries examined. It does not, however, mean that the approach is better than a uniform tariff when all industries are considered since a uniform tariff would provide a level playing field for producers of raw materials, intermediate goods and final products in Laos, which could be a more effective industrialization strategy than protection of specific industries.

Table 6.1: Effect of Alternative Tariff Reform Strategies

	Beer		Cement		Steel Bars	
	Tariff Escalation ^{2/}	Uniform Tariff	Tariff Escalation	Uniform Tariff	Tariff Escalation	Uniform Tariff
NRP on Outputs	110%	110%	18%	18%	15%	15%
NRP on Inputs	0%	110%	0%	18%	0%	15%
Effective Rate of Protection ^{1/}	na	na	101%	55%	59%	20%
Change in Imports (from free trade) ^{2/}	-26%	-13%	-11%	-8%	-12%	-5%
Government Revenue from NTB Tariffication ^{3/}	na		10%		12%	
Total Government Revenue Effect ^{4/}	110%		16%		17%	
Production Volume Adjustments	26%	13%	11%	8%	12%	5%
Employment Effect	26%	13%	11%	8%	12%	5%

1/ Assumes that non-tariff measures are converted to tariff equivalents

2/ Applies existing tariff and tariff equivalents of NTBs.

3/ Additional government revenue relative to total value of imports with ad valorem tariff equivalent.

4/ Total government revenue relative to total value of imports with ad valorem tariff equivalent.



The results also point to the effectiveness of converting non-tariff measures to tariffs. Tariffication would increase government revenue by an additional 16 to 17 percent over the current level of government revenue. Additionally the tariffication would reduce the administrative costs of managing the non-tariff measures and free up scarce human resources in the public sector for other activities. Finally, it would provide greater transparency and predictability, and thereby bring Lao PDR's tariff regime closer to the guidelines established by the WTO.

6.5 Conclusions and Recommendations

Guiding Principles - An optimal trade policy regime is predictable, transparent and administered in a way that consumers, producers and investors can rely on market signals provided by prices that bear some established relationship to the trade regime. As such, tariffs are the best known transparent instrument of protection. They provide administrative predictability and transparency, and they offer an easy way to accomplish tariff reductions in a way that signals to economic agents that the country is on the path to a market-based economy. For those reasons, it would be preferable to eliminate existing non-tariff measures that promote inefficiencies and rent-seeking and adopt a system based solely on tariffs as the instrument of protection. Excise and consumer taxes are consistent with a predictable and transparent system since they do not discriminate between foreign and domestic goods.

Lessons Learned from Other ASEAN Countries – The lessons learned from the other ASEAN countries, especially the recent experiences of Cambodia, also an LDC, and Vietnam, are that protection can be effectively applied to some industries, especially those that are in infant stages of development, and that the most effective instrument for that type of protection is provided by tariffs. The reason is that tariff measures are less likely to lead to rent seeking and costly administrative practices, and they limit the exercise of possible domestic monopoly power. By making tariffs the centerpiece of trade policy, the ASEAN countries have brought their economic policies in line with WTO practices in which tariffs are, with very few exceptions, the only acceptable tool for protection. These trade policy adjustments have been conditional on parallel domestic policy reforms, and together they have provided the means by which those ASEAN countries have effectively integrated their economies into the global trading system.

Transforming Non-Tariff Measures into Tariffs – The Government's use of non-tariff measures in the cement and steel bar industries is based on its desire to promote them both as infant and strategic industries. However, those types of measures create inefficiencies, and they lack transparency and predictability. In Lao PDR's accession negotiations, it is likely that members will stress the need the Government to abide by WTO's transparency obligations, as contained in GATT Article X. Likewise, the predictability principle can be ensured by providing preferences to tariffs over less transparent and less secure non-tariff measures such as quotas and licenses. Only regimes based on tariffs can ensure that the variance in protection is kept within observable limits.

Tariffs on Beer – The existing nominal rate of protection (NRP) of 110 percent for the domestic brewer industry is considerably higher than the level of protection given to the domestic beer industries of other ASEAN countries. On average the tariff rate of other ASEAN countries is about 40 percent. Moreover, CEPT-AFTA rates are much lower in other countries, averaging only 11 percent compared with the 40 percent rate of Laos. Nevertheless, Laos is committed to reducing its CEPT-AFTA rate on beer to zero percent



by 2015. There is therefore considerable scope for also reducing the MFN rate to a level that would be more in line with other ASEAN countries over the next few years.

Making the Industry More Competitive following WTO Accession – Lao PDR’s transition to a market economy along with its accession to the WTO will place increasing pressures on the brewery and construction industries to enhance their competitiveness without having to rely on protection and subsidies. While infant industry protective measures can be used to help that transition process, the country’s Action Plan submitted to the WTO will necessarily include a timeline for the elimination of WTO- inconsistent measures. That timeline increases the importance of introducing effective measures to support and facilitate the transition of these industries to maturity or enhanced those that already exist. Industry-specific adjustments directly affecting the industry’s production costs include:

- ✓ Skills development through sustainable business development services that promote the use of advanced technologies and modern management techniques.
- ✓ Expanded use of upstream activities within the country to lower the costs of sourcing supplies from neighboring countries.
- ✓ Greater use of networking facilities and clusters to upgrade suppliers and supporting services.
- ✓ Continued dissemination of modern production facilities and environmentally friendly production technologies.
- ✓ Improvements in transportation and logistics to reduce costs of raw material sourcing and distribution to domestic markets.
- ✓ Improved access to credit at competitive rates or soft loans from commercial and development banks.

Equally important are economy-wide reforms that affect the costs of domestic business activity and thereby directly impact on the ability of the industries to compete with foreign suppliers, especially:

- ✓ Introducing the specific trade reforms enumerated below aimed at reducing market distortions while concurrently supporting the industries targeted by the government’s industrialization program.
- ✓ Reducing the cost of doing business in the areas identified as having low rankings in the country relative to those of neighboring countries that represent important competitors for the target industries.
- ✓ Reviewing exchange rate policies affecting the country’s competitiveness with neighboring countries, particularly in the light of changes in the management of currencies taking place in Asian countries during the rebalancing of the global economy.

Potential Trade Reforms – The contrast between the present trade regime and alternative regimes suggests a remaining agenda for reforms. Such an agenda is not too difficult to identify and could include the following elements.

- ✓ Initially convert existing non-tariff measures in cement to an ad valorem tariff equivalent of 11 percent and convert those in steel bars to an ad valorem tariff of 12 percent to make tariffs the only instrument of protection, increase transparency, enhance government revenue and reduce administrative costs in the public sector.
- ✓ Over the next few years, reduce the overall tariff level on beer to zero to bring it in line with CEPT-AFTA rates by 2015, and bring it in line with competitive practices of others.
- ✓ Over the next few years, reduce the ad valorem tariff equivalent on cement and steel bars from their effective duty rates of 16-17 percent to more competitive MFN rates of



5 to 10 percent.

- ✓ Reduce nominal tariff dispersion by moving to fewer rates in stages that would lead to a multi-tier structure of three to five rates.
- ✓ Gradually reduce tariffs on inputs for the selected industries to zero to improve their cost competitiveness and provide greater effective rates of protection.
- ✓ In the interim, allow duty-free access to foreign inputs through the introduction of duty drawback and temporary admission systems.

While these prescriptions for the industries may appear daunting to some, without them there is a strong likelihood that the competitiveness of the industries will be eroded following the country's accession and full implementation of the Action Plan for compliance with WTO rules. For the private sector, it means establishing realistic industrialization targets that match the country's human and natural resource development potential; for the government, it means more effectively coordinating plans, programs and implementation projects across agencies; and for development partners and donors it means improve collaboration among agencies so as to ensure complementarity of programs and projects supporting the country's industrial development program.



ANNEX A: Calculation of Ad Valorem Tariff Equivalents of Non-Tariff Measures for Selected Industries

1	DERIVATION OF AD VALOREM TARIFF EQUIVALENTS OF NTBS	Unit	Source / Formula	Beer	Cement	Steel Bars
2	Inputs					
3	Material Inputs	Billion Kip	Industry surveys		122	45
4	Other tradable inputs	Billion Kip	Industry surveys		75	41
5	Total tradable inputs	Billion Kip	Line 3+4		197	87
6	Processed Products Quantities & Values					
7	Conversion factor (share of tradable inputs in output)	Percent	Line 5/9		31%	36%
8	Production Volume	Mil liters & 1000 tons	Dept of Statistics	136.3	831.2	23.9
9	Production Value	Billion Kip	Line 8x17	602.9	635.5	243.4
10	Consumption	Billion Kip	Lines 9+11-12	612.7	1,076	775
11	Imports	1000US\$	COMTRADE data	1,298	48,328	58,297
12	Exports	1000US\$	COMTRADE data	224	5	16
13	Imports	Billion Kip	Line 11xLine 49	12	441	531
14	Exports	Billion Kip	Line 12xLine 49	2	0	0
15						
16	Wholesale price for tradable inputs (P_w)	Unit	na	na	na	na
17	Wholesale price for processed goods (P_{wp})	1000Kip/MT	MOIC Internal Trade Dept		764.6	10,195
18	Tax on primary good production ($s_f < 0$ if a subsidy)	proportion	Turnover tax or VAT	10%	10%	10%
19	Tax on processed good production ($s_p < 0$ if a subsidy)	proportion	Turnover tax or VAT	10%	10%	10%
20	Consumer tax on processed products ($c_{cp} < 0$ if a subsidy)	proportion	Consumer tax	0%	0%	0%
21						
22	Processed products:					
23	cif import price (P_{mp})	Beer: US\$/100liter; cement & steel: US\$/MT	Customs Dept	160.3	65.9	796.2
24	fob export price (P_{xp})		Customs Dept	na	56.0	676.7
25	International reference price (P_p)					
26	International trading cost for imports (T_{mp})	proportion	Steel: www.steelonthenet.com		16%	15%
27	International trading cost for exports (T_{xp})	proportion	Cement: http://www.bnamericas.com/news/infrastructure/Hefty_Cement_Costs_Problem_for_Constructors Beer:		16%	15%
28						
29	Quality adjustment:					
30	Primary good - Quality adjustment for imports (q_m)	proportion		1.0	1.0	1.0
31	Processed goods - Quality adjustment for imports (q_{mp})	proportion	Industry surveys (superior = negative)	0.9	1.1	1.2
32	Processed goods - Quality adjustment for exports (q_{xp})	proportion		0.9	1.1	1.2
33	Trade subsidies and taxes					
34	Primary good - Import tariff ($t_m < 0$ if a subsidy)	proportion			5.6%	5.0%
35	Primary good - Export subsidy ($s_x < 0$ if a tax)	proportion	Input-weighted average from ERP Tables	0.0%	0.0%	0.0%
36	Processed goods - Import tariff ($t_{mp} < 0$ if a subsidy)	proportion	Customs Dept	40.0%	5.0%	5.0%
37	Processed goods - Excise tax	proportion	Customs Dept	50.0%	0.0%	0.0%



	DERIVATION OF AD VALOREM TARIFF EQUIVALENTS OF NTBS			Unit	Source / Formula	Beer	Cement	Steel Bars
38		Processed goods - Import tariff + Excise tax	proportion		Customs Dept	110.0%	5.0%	5.0%
39		Processed goods - Export subsidy ($S_{xp} < 0$ if a tax)	proportion		Customs Dept	0.0%	0.0%	0.0%
40		Exchange rate						
41		Official exchange rate	kip/US\$		Average 2007/08 fiscal year	9,115	9,115	9,115
42		Proportion of foreign currency sold on the parallel market	proportion			0%	0%	0%
43		Parallel market rate (leave "n.a." if no parallel market exists)	kip/US\$			n.a.	n.a.	n.a.
44		Discounted parallel market rate	kip/US\$			n.a.	n.a.	n.a.
45		Primary good - Relevant exchange rate for imports (E_m)	kip/US\$			9,115	9,115	9,115
46		Primary good - Relevant exchange rate for exports (E_x)	kip/US\$			9,115	9,115	9,115
47		Processed goods - Relevant exchange rate for imports (E_{mp})	kip/US\$			9,115	9,115	9,115
48		Processed goods - Relevant exchange rate for exports (E_{xp})	kip/US\$			9,115	9,115	9,115
49		Equilibrium exchange rate which would prevail in undistorted mkt (E)	kip/US\$			9,115	9,115	9,115
50								
51	4. PRICE MARGINS	Wholesale price for processed goods (P_{wp})	1000Kip/100liter or MT		Line 17		765	10,195
52		Retail markup on processed wholesale prices (net of consumption tax)	proportion		Line 53/51		5.6%	5.0%
53		Retail price for processed goods (P_{rp}) (including consumption tax)	1000Kip/MT		Cement: Lao industry data; steel: www.steelonthenet.com		807	10,705
54								
55	5. PRIMARY PRODUCT	% of production exported in primary form	%		Industry surveys	0%	0%	0%
56		% of primary production that is processed	%		Industry surveys	100%	100%	100%
57		% of primary production for final use	%		Industry surveys	100%	100%	100%
58		% of domestic utilization imported	%		Line 11/10		na	na
59								
60	6. OUTPUT	% processed output exported	%		Line 14/8	1.5%	0.0%	0.6%
61		% of consumption imported	%		Line 11/10		41%	69%
62		% self-sufficiency overall	%		Line 9/(10+13-12)		42%	19%
63								
64	7. UNDISTORTED INTERNATIONAL PRICES	Undistorted international price - processed products (P_{ip})						
65		Importable	Beer: kip/liter; cement & steel: 1000kip/MT		Customs Dept	13,150	660	8,708
66		Exportable			COMTRADE data X exch rate 2008	14,611	600	7,257
67								
68	8. NOMINAL RATE OF ASSISTANCE	NRA_p: Processed goods			Lines:			
69		Importable	proportion		(1+19)*51/65-1		27.3%	28.8%
70		Exportable	proportion		(1+19)*51/66-1		40.1%	54.5%
71								
72	9. CONSUMER TAX EQUIVALENT	CTE_{cp}: Consumers, processed goods			Lines:			
73		Importable	proportion		(1+20)*51/65-1		15.8%	17.1%
74		Exportable	proportion		(1+20)*51/66-1		27.3%	40.5%
75								
76	10. NTBS	Tariff equivalent of NTBs on importable processed products, NTB _m	proportion		$(69+1)((1+19)/(1+(47-49)/49))-1-38$		10.8%	12.1%
77		Tariff equivalent of NTBs on exportable processed products, NTB _x (NTB _m < 0, subsidy on exports)	proportion		$1+39-((70+1)/((1+19)*(1-(49-48)/49)))$		-27.3%	-40.5%
78								
79	11. % OF NRA	% proportion of NRA_p:						
80		Importable processed products:			Lines:		100%	100%



1	DERIVATION OF AD VALOREM TARIFF EQUIVALENTS OF NTBS	Unit	Source / Formula	Beer	Cement	Steel Bars
81	Exchange rate distortions (if importable)	%	$((47-49)/49)/(((47-49)/49)+19+76+38)$	0%	0%	0%
82	Import tariffs (if importable)	%	$38/(((45-47)/47)+19+74+38)$	32%	29%	29%
84	NTBs (if importable)	%	$74/(((45-47)/47)+19+74+38)$	68%	71%	71%
85	Exportable processed products:			100%	100%	100%
86	Exchange rate distortions (if exportable)	%	$(-(49-48)/49)/(-(49-48)/49)+19-77+39)$	0%	0%	0%
87	Export subsidies (if exportable)	%	$39/(-(49-48)/49)+19-77+39)$	0%	0%	0%
89	NTBs (if exportable)	%	$-75/(-(47-46)/47)+19-75+39)$	100%	100%	100%

Source: calculations by author based on methodology adopted from Kym Anderson and Will Martin, "Distortions to Agricultural Incentives in Asia". Washington, DC: The World Bank, 2009.

ANNEX B: Practitioners Guide to Calculating the Effective Rate of Protection for Selected Industries

A widely advocated reason for imposing a tariff is to protect domestic industries from foreign competition, especially for their strategic industries like cement or steel, or for infant industries to be protected during the formative period. The rate of protection is the increase in the price of an imported commodity and the import-substitute (an equivalent product made by a local manufacturer) in proportion to its border price. The price increase is the amount of market protection provided to domestic producers. When there is no other trade barrier, it simply equals the tariff rate. The *effective rate of protection* (ERP) is the proportional increase in the domestic so-called value-added, and it is therefore the portion of the price that is added to the value of the domestically produced good. Then the ERP is the relative increase in value-added in a tariff-protected industry over the value-added of that product under free trade, as measured by the border prices.

The ERP can be defined for a product j as the percentage excess of domestic value added, V over the international market value added, W , i.e., that which would have been realized in the absence of the existing tariff structure:

$$ERP_j = (V_j - W_j) / W_j \quad \dots(B.1)$$

The main determinant of the ERP level is the relationship between the nominal rates of protection of outputs and inputs, although the share of tradable inputs in any selected activity, or the technical coefficient, also influences the level of the ERP. In practice, the ERP can be calculated either through detailed information concerning the activities at the firm level, as was done in the present study, or through the data supplied by input-output tables. Either way, the data is used to calculate the ERP in the following manner:

Let $W_j = P_j(1 - \sum_i a_{ij})$ and $V_j = P_j[(1+t_j) - \sum_i a_{ij}(1+t_i)]$, where a_{ij} is the technical coefficient of input i in activity j , i.e., the value of input i per unit value of output in activity j ; t_j is the nominal rate of protection of production of j ; and t_i is the nominal rate of protection of input i . Then from equation (B.1) we can express the level of effective protection as follows:

$$ERP_j = \{P_j[(1+t_j) - \sum_i a_{ij}(1+t_i)] / P_j(1 - \sum_i a_{ij})\} - 1 \quad \dots(B.2)$$

Rearranging terms yields the formula used to estimate the level of effective protection:

$$\begin{aligned} ERP_j &= (t_j - \sum_i a_{ij}t_i) / (1 - \sum_i a_{ij}) \\ &= (1 - \sum_i a_i) / \{[1/(1+t)] - \sum_i [a_i/(1+t_i)]\} - 1 \end{aligned} \quad \dots(B.3)$$

The results of the calculations are shown in Table B.1 for cement and B.2 for steel bars. The first line of the tables gives the domestic price and the border price of the net total product for each industry. The value product equals net output plus subsidies less taxes on each product. Afterwards, the cost of intermediate material inputs, services, fuel, power, and other overhead costs. The data on production costs of the cement industry are from one of the large domestic producers and have been applied to total cement production of Laos in 2008 reported by the Department of Statistics of the Ministry of Planning and Investment. The data on production costs of the steel bar industry is also based on production costs reported by one of the large steel bar producers in the country,



but additional production cost information has been obtained from international sources for a typical steel producer.⁶⁸

Table B.1: Calculation of Effective Rate of Protection for Cement Industry

CEMENT	2008 Domestic Price Equivalent (mil. Kip)	2008 Border Price Equivalent (mil. Kip)	Tariff Rate (t)	Border Price Based		Domestic Price Based		HS codes
				Coef. (ai)	aiti	ai-prime	ai prime/(1+ti)	
Products, Subsidies and Taxes								
Total Product	621,842	592,230	5.0%					2523
Finished products	690,935							
Taxes: VAT 10%	69,094							
Tradable Material Input	117,586	111,986		0.189				
Coal	48,560	46,248	5.0%	0.078	0.004	0.078	0.074	2505
Limestone	27,158	25,865	5.0%	0.044	0.002	0.044	0.042	2521
Diesel	20,308	19,341	5.0%	0.033	0.002	0.033	0.031	271019
Gypsum	12,500	11,905	5.0%	0.020	0.001	0.020	0.019	2520
Crushed limestone	5,120	4,876	5.0%	0.008	0.000	0.008	0.008	2521
Clay sand	2,131	2,029	5.0%	0.003	0.000	0.003	0.003	2508
Sillica clay	1,071	1,020	5.0%	0.002	0.000	0.002	0.002	2508
Iron clay	737	702	5.0%	0.001	0.000	0.001	0.001	2508
Other Tradable Inputs	71,916	64,090		0.108				
Cement bag	25,852	21,544	20.0%	0.036	0.007	0.042	0.035	39231090
Spare parts	21,778	19,798	10.0%	0.033	0.003	0.035	0.032	8409
Refractory	9,592	9,135	5.0%	0.015	0.001	0.015	0.015	6901
Lubricant	8,792	7,992	10.0%	0.013	0.001	0.014	0.013	3403
Grinding media	5,079	4,837	5.0%	0.008	0.000	0.008	0.008	6804
Other materials	823	784	5.0%	0.001	0.000	0.001	0.001	na
Non-Tradable Inputs	246,637	246,637						
Electricity	62,857	62,857		0.106	-	0.101	0.101	
Overhead	13,520	13,520		0.023	-	0.022	0.022	
Depreciation	170,260	170,260		0.287	-	0.274	0.274	
Total Non-Factor Cost	436,139	422,714		0.822	0.023	0.701	0.680	
ERP = [t-sum(ati)] / [1-sum(a)]			9.5%					
CHECKS:								
Value Added Vd	43,872							
Value Added Vw	40,048							
Vd/Vw-1	9.5%							
(Vd-Vw)/Vw	9.5%							
[t-sum(ati)]/[1-sum(a)]	9.5%							

Note: the domestic price equivalent of the finished product is calculated as the wholesale price in Vientiane City multiplied by the number of tons produced (reported total profit divided by profit per ton).

⁶⁸ The data source is <http://www.steelonthenet.com/prices.html>.


Table B.2: Calculation of Effective Rate of Protection for Steel Bar Industry

STEEL BARS	Domestic Price Equivalent (mil. Kip)	Border Price Equivalent (mil. Kip)	Tariff Rate (t)	Border Price Based		Domestic Price Based		HS codes
				Coef. (ai)	aiti	ai-prime	ai prime/(1+ti)	
Products, Subsidies and Taxes								
Total Product	161,742	154,040	5.0%					7213
Finished products	179,713	169,444						
Taxes: VAT 10%	17,971							
Tradable Material Inputs	64,402	61,335		0.398				
Iron ore & scrap	22,386.6	21,320.6	5.0%	0.138	0.007	0.138	0.132	260111
Coking coal	34,787.5	33,130.9	5.0%	0.215	0.011	0.215	0.205	270112
Steel scrap	5,342.9	5,088.4	5.0%	0.033	0.002	0.033	0.031	720449
Oxygen	1,884.7	1,794.9	5.0%	0.012	0.001	0.012	0.011	2520
Other Tradable Inputs	22,173	21,117		0.137				
Ferroalloys	6,058.8	5,770.3	5.0%	0.037	0.002	0.037	0.036	2521
Fluxes	4,068.5	3,874.7	5.0%	0.025	0.001	0.025	0.024	
Refractory	1,675.3	1,595.5	5.0%	0.010	0.001	0.010	0.010	6901
Other materials	10,370.6	9,876.8	5.0%	0.064	0.003	0.064	0.061	na
Non-Tradable Inputs	16,525	16,525						
Electricity	1,966.4	1,966.4		0.013	-	0.012	0.012	
Overhead	3,988.7	3,988.7		0.026	-	0.025	0.025	
Depreciation	10,570.1	10,570.1		0.069	-	0.065	0.065	
Total Non-Factor Cost	103,100	98,977		0.780	0.027	0.637	0.612	
ERP = [t-sum(ai)] / [1-sum(a)]			6.5%					
CHECKS:								
Value Added Vd	58,642							
Value Added Vw	55,062							
Vd/Vw-1	6.5%							
(Vd-Vw)/Vw	6.5%							
[t-sum(ai)]/[1-sum(a)]	6.5%							

ANNEX C: Trade Statistics

Table Note

The following data is based on so-called 'mirror trade data, which uses partner country data to determine the volume and value of Lao PDR's imports and exports of beer, cement and steel bars.

Source of data: United Nations, COMTRADE database. Available: <http://comtrade.un.org/>

The following HS2002 lines are represented in the following tables:

BEER:

2203 – Beer made from malt

CEMENT:

2523 – Portland cement, aluminous cement, slag cement etc

3214 – Glaziers putty, resin cements, caulking comps etc

3816 – Refractory cements, mortars, concretes, etc. nesoi

6810 – Articles of cement, concrete or artificial stone

6811 - Articles of asbestos-cement, cell fib cement etc

STEEL BAR

7213 – Bars & rods, iron & na steel, h-r irreg coils

7214 – Bars & rods, iron & na steel nesoi, h-r etc

7215 – Bars & rods, iron & na steel nesoi

7221 – Bars and rods, stainless steel, hot-rolled, irreg coils

7222 – Bars & rods, st steel nesoi, angles etc, st steel

7227 – Bars & rods alloy steel nesoi, hot-rolled irreg coils

7228 – Alloy steel nesoi bars, angles etc, hol dr st bars etc

Beer (HS2203) - Value in US dollars			
	Exports	Imports	X - M Bal
1988		11,627	
1989		83,949	
1990		11,962	
1991		17,808	
1992		137,609	
1993		845,124	
1994		1,474,112	
1995		2,080,072	
1996	4,764	1,133,086	-1,128,322
1997	9,606	830,897	-821,291
1998	29,687	104,247	-74,560
1999	40,670	405,718	-365,048
2000	198,445	501,527	-303,082
2001	54,625	512,579	-457,954
2002	50,594	421,971	-371,377
2003	95,741	543,968	-448,227
2004	194,804	470,791	-275,987
2005	186,856	1,048,820	-861,964
2006	270,556	2,084,808	-1,814,252
2007	395,161	1,359,928	-964,767
2008	223,590	1,297,642	-1,074,052

Beer (HS2203) - Volume in Liters			
	Exports	Imports	X - M Bal
1988		18,218	-18,218
1989		146,554	-146,554
1990		15,375	-15,375
1991		27,964	-27,964
1992		149,311	-149,311
1993		762,807	-762,807
1994		1,221,499	-1,221,499
1995		1,802,242	-1,802,242
1996	4,562	951,437	-946,875
1997	9,000	681,804	-672,804
1998	35,250	125,280	-90,030
1999	52,842	340,077	-287,235
2000	226,001	444,985	-218,984
2001	66,512	448,371	-381,859
2002	47,321	352,219	-304,898
2003	114,214	405,908	-291,694
2004	195,446	343,057	-147,611
2005	202,422	1,063,186	-860,764
2006	348,553	2,021,187	-1,672,634
2007	419,528	1,209,264	-789,736
2008	289,460	1,188,281	-898,821



Cement TOTAL - Value in US dollars			
	Exports	Imports	X - M Bal
1988	0	29,271	-29,271
1989	0	2,590,691	-2,590,691
1990	0	1,522,740	-1,522,740
1991	0	1,280,757	-1,280,757
1992	0	3,846,890	-3,846,890
1993	0	9,368,181	-9,368,181
1994	0	11,633,090	-11,633,090
1995	0	18,896,528	-18,896,528
1996	0	18,234,571	-18,234,571
1997	5,073	16,324,853	-16,319,780
1998	0	16,599,639	-16,599,639
1999	50,834	16,727,399	-16,676,565
2000	0	19,100,462	-19,100,462
2001	3,714	19,052,394	-19,048,680
2002	0	14,766,391	-14,766,391
2003	0	15,217,212	-15,217,212
2004	0	20,351,065	-20,351,065
2005	86,000	19,606,248	-19,520,248
2006	24	37,713,986	-37,713,962
2007	3,600	43,091,137	-43,087,537
2008	4,874	48,328,073	-48,323,199

Cement TOTAL - Volume in Kg			
	Exports	Imports	X - M Bal
1988	0	47,000	-47,000
1989	0	37,098,753	-37,098,753
1990	0	18,433,742	-18,433,742
1991	0	10,746,653	-10,746,653
1992	0	46,007,442	-46,007,442
1993	0	139,911,291	-139,911,291
1994	0	188,730,562	-188,730,562
1995	0	264,119,481	-264,119,481
1996	0	259,264,256	-259,264,256
1997	21,249	294,740,094	-294,718,845
1998	0	334,888,507	-334,888,507
1999	142,789	313,389,197	-313,246,408
2000	0	308,932,887	-308,932,887
2001	10,800	448,273,814	-448,263,014
2002	0	330,919,942	-330,919,942
2003	0	288,637,107	-288,637,107
2004	0	323,438,536	-323,438,536
2005	211,200	1,477,837,011	-1,477,625,811
2006	400	643,209,957	-643,209,557
2007	90,000	753,831,967	-753,741,967
2008	59,725	577,806,854	-577,747,129

Portland Cement (HS2523) – Value in US dollars			
	Exports	Imports	X - M Bal
1988			
1989		2,189,611	-2,189,611
1990		1,011,533	-1,011,533
1991		437,775	-437,775
1992		2,739,547	-2,739,547
1993		7,794,820	-7,794,820
1994		9,290,224	-9,290,224
1995		14,474,724	-14,474,724
1996		13,782,604	-13,782,604
1997	2,292	13,692,667	-13,690,375
1998		11,399,613	-11,399,613
1999		11,901,183	-11,901,183
2000		14,267,652	-14,267,652
2001		13,889,024	-13,889,024
2002		9,666,298	-9,666,298
2003		9,492,901	-9,492,901
2004		10,713,070	-10,713,070
2005		11,606,668	-11,606,668
2006	24	25,527,615	-25,527,591
2007	3,600	27,845,607	-27,842,007
2008	4,874	30,010,628	-30,005,754

Portland Cement (HS2523) - Volume in Kg			
	Exports	Imports	X - M Bal
1988			0
1989		33,943,241	-33,943,241
1990		15,780,210	-15,780,210
1991		6,203,312	-6,203,312
1992		40,737,785	-40,737,785
1993		131,462,850	-131,462,850
1994		174,004,874	-174,004,874
1995		240,900,560	-240,900,560
1996		236,536,048	-236,536,048
1997	11,437	275,858,534	-275,847,097
1998		293,007,226	-293,007,226
1999		276,411,893	-276,411,893
2000		269,831,930	-269,831,930
2001		403,765,950	-403,765,950
2002		288,469,543	-288,469,543
2003		236,659,613	-236,659,613
2004		277,093,599	-277,093,599
2005		1,421,905,373	-1,421,905,373
2006	400	565,453,907	-565,453,507
2007	90,000	664,909,414	-664,819,414
2008	59,725	477,532,137	-477,472,412



Refractory Cement (HS3816) – Value in US dollars			
	Exports	Imports	X - M Bal
1988			
1989		19,547	-19,547
1990			0
1991			0
1992		612	-612
1993			0
1994		17,362	-17,362
1995		14,538	-14,538
1996		1,384	-1,384
1997		1,913	-1,913
1998		3,879	-3,879
1999		9,409	-9,409
2000		336	-336
2001		27,461	-27,461
2002		19,766	-19,766
2003		7,373	-7,373
2004		84,834	-84,834
2005		20,423	-20,423
2006		808,094	-808,094
2007		573,124	-573,124
2008		578,733	-578,733

Refractory Cement (HS3816) - Volume in Kg			
	Exports	Imports	X - M Bal
1988			0
1989		11,875	-11,875
1990			0
1991			0
1992		2,000	-2,000
1993			0
1994		8,750	-8,750
1995		8,625	-8,625
1996		1,187	-1,187
1997		5,375	-5,375
1998		4,062	-4,062
1999		30,812	-30,812
2000		440	-440
2001		106,031	-106,031
2002		77,100	-77,100
2003		32,715	-32,715
2004		166,994	-166,994
2005		60,056	-60,056
2006		2,561,846	-2,561,846
2007		3,293,526	-3,293,526
2008		1,278,275	-1,278,275

Cement Articles (HS6810) – Value in US dollars			
	Exports	Imports	X - M Bal
1988			
1989		171,108	-171,108
1990		48,188	-48,188
1991		38,597	-38,597
1992		51,111	-51,111
1993		159,332	-159,332
1994		391,466	-391,466
1995		278,159	-278,159
1996		1,182,758	-1,182,758
1997		622,444	-622,444
1998		498,104	-498,104
1999		540,527	-540,527
2000		643,885	-643,885
2001	3,714	702,620	-698,906
2002		601,468	-601,468
2003		929,311	-929,311
2004		3,759,444	-3,759,444
2005	86,000	1,206,007	-1,120,007
2006		1,450,187	-1,450,187
2007		3,603,421	-3,603,421
2008		2,960,257	-2,960,257

Cement Articles (HS6810)			
	Exports	Imports	X - M Bal
1988			0
1989		2,171,518	-2,171,518
1990		638,233	-638,233
1991		666,448	-666,448
1992		528,432	-528,432
1993		2,123,310	-2,123,310
1994		6,225,592	-6,225,592
1995		5,535,103	-5,535,103
1996		8,634,561	-8,634,561
1997		8,605,159	-8,605,159
1998		10,071,229	-10,071,229
1999		9,501,424	-9,501,424
2000		9,775,620	-9,775,620
2001	10,800	11,501,759	-11,490,959
2002		8,992,664	-8,992,664
2003		15,777,079	-15,777,079
2004		10,858,394	-10,858,394
2005	211,200	12,293,834	-12,082,634
2006		16,015,945	-16,015,945
2007		32,147,523	-32,147,523
2008		25,942,385	-25,942,385



Asbestos Cement (HS6811) – Value in US dollars			
	Exports	Imports	X - M Bal
1988		29,271	-29,271
1989		210,425	-210,425
1990		463,019	-463,019
1991		804,385	-804,385
1992		1,055,620	-1,055,620
1993		1,414,029	-1,414,029
1994		1,934,038	-1,934,038
1995		4,129,107	-4,129,107
1996		3,267,825	-3,267,825
1997	2,781	2,007,829	-2,005,048
1998		4,698,043	-4,698,043
1999	50,834	4,276,280	-4,225,446
2000		4,188,589	-4,188,589
2001		4,433,289	-4,433,289
2002		4,478,859	-4,478,859
2003		4,787,627	-4,787,627
2004		5,793,717	-5,793,717
2005		6,773,150	-6,773,150
2006		9,928,090	-9,928,090
2007		11,068,985	-11,068,985
2008		14,778,455	-14,778,455

Asbestos Cement (HS6811)			
	Exports	Imports	X - M Bal
1988		47,000	-47,000
1989		972,119	-972,119
1990		2,015,299	-2,015,299
1991		3,876,893	-3,876,893
1992		4,739,225	-4,739,225
1993		6,325,131	-6,325,131
1994		8,491,346	-8,491,346
1995		17,675,193	-17,675,193
1996		14,092,460	-14,092,460
1997	9,812	10,271,026	-10,261,214
1998		31,805,990	-31,805,990
1999	142,789	27,445,068	-27,302,279
2000		29,324,897	-29,324,897
2001		32,900,074	-32,900,074
2002		33,380,635	-33,380,635
2003		36,167,700	-36,167,700
2004		35,319,549	-35,319,549
2005		43,577,748	-43,577,748
2006		59,178,259	-59,178,259
2007		53,481,504	-53,481,504
2008		73,054,057	-73,054,057

Steel Bars TOTAL - Value in US dollars			
	Exports	Imports	X - M Bal
1988	50,860	42,426	8,434
1989	437,819	499,630	-61,811
1990	167,640	900,756	-733,116
1991	0	1,059,268	-1,059,268
1992	0	577,767	-577,767
1993	0	1,356,478	-1,356,478
1994	132,000	4,614,728	-4,482,728
1995	361,037	7,343,618	-6,982,581
1996	0	6,333,859	-6,333,859
1997	44,710	6,251,488	-6,206,778
1998	25,849	7,900,126	-7,874,277
1999	0	4,465,416	-4,465,416
2000	0	8,331,059	-8,331,059
2001	96,525	6,596,032	-6,499,507
2002	0	10,467,848	-10,467,848
2003	18,618	11,630,675	-11,612,057
2004	2,858	13,460,626	-13,457,768
2005	746	14,112,908	-14,112,162
2006	0	22,600,217	-22,600,217
2007	20,400	46,083,866	-46,063,466
2008	16,459	58,296,575	-58,280,116

Steel Bars TOTAL - Volume in Kg			
	Exports	Imports	X - M Bal
1988	100,000	55,000	45,000
1989	1,467,125	527,034	940,091
1990	566,191	2,444,401	-1,878,210
1991	0	2,373,494	-2,373,494
1992	0	2,011,371	-2,011,371
1993	0	3,411,929	-3,411,929
1994	400,000	10,429,424	-10,029,424
1995	1,214,757	16,711,139	-15,496,382
1996	0	102,397,328	-102,397,328
1997	124,913	18,950,769	-18,825,856
1998	50,687	27,882,955	-27,832,268
1999	142,789	17,439,799	-17,297,010
2000	0	29,750,408	-29,750,408
2001	96,525	25,656,259	-25,559,734
2002	0	38,998,241	-38,998,241
2003	30,000	36,103,085	-36,073,085
2004	193	28,218,323	-28,218,130
2005	182	30,474,947	-30,474,765
2006	0	44,237,817	-44,237,817
2007	20,400	75,175,095	-75,154,695
2008	26,152	110,421,343	-110,395,191



Steel Bars (HS 7213) – Value in US dollars			
	Exports	Imports	X - M Bal
1988	20,860	20,860	0
1989	216,344	328,766	-112,422
1990		22,102	-22,102
1991		232,077	-232,077
1992		258,522	-258,522
1993		180,796	-180,796
1994	132,000	347,977	-215,977
1995	288,737	489,112	-200,375
1996		1,186,750	-1,186,750
1997		452,566	-452,566
1998	25,849	1,904,495	-1,878,646
1999		333,489	-333,489
2000		2,784,656	-2,784,656
2001		1,317,157	-1,317,157
2002		2,406,097	-2,406,097
2003		1,909,338	-1,909,338
2004		2,340,968	-2,340,968
2005		3,153,359	-3,153,359
2006		6,195,191	-6,195,191
2007		8,565,789	-8,565,789
2008		3,542,912	-3,542,912

Steel Bars (HS 7213) - Volume in Kg			
	Exports	Imports	X - M Bal
1988	70,000		70,000
1989	719,125	206,080	513,045
1990		50,561	-50,561
1991		430,562	-430,562
1992		526,246	-526,246
1993		387,568	-387,568
1994	400,000	651,431	-251,431
1995	1,008,187	495,548	512,639
1996		3,047,036	-3,047,036
1997		1,337,856	-1,337,856
1998	50,687	7,230,623	-7,179,936
1999		1,005,193	-1,005,193
2000		9,415,172	-9,415,172
2001		5,578,821	-5,578,821
2002		9,806,247	-9,806,247
2003		5,818,088	-5,818,088
2004		4,687,419	-4,687,419
2005		6,614,229	-6,614,229
2006		12,627,631	-12,627,631
2007		15,472,523	-15,472,523
2008		4,315,261	-4,315,261

Steel Bars (HS 7214) - Value in US dollars			
	Exports	Imports	X - M Bal
1988		21,566	-21,566
1989	221,475	19,426	202,049
1990	167,640	765,954	-598,314
1991		168,848	-168,848
1992		147,208	-147,208
1993		404,584	-404,584
1994		1,499,568	-1,499,568
1995	72,300	3,272,465	-3,200,165
1996		2,083,050	-2,083,050
1997	44,710	2,648,537	-2,603,827
1998		4,086,994	-4,086,994
1999		1,937,832	-1,937,832
2000		4,191,142	-4,191,142
2001		3,630,715	-3,630,715
2002		4,115,936	-4,115,936
2003	14,094	4,049,908	-4,035,814
2004	2,858	6,852,221	-6,849,363
2005		5,638,707	-5,638,707
2006		6,371,281	-6,371,281
2007		18,750,843	-18,750,843
2008	5,028	33,546,929	-33,541,901

Steel Bars (HS 7214) - Volume in Kg			
	Exports	Imports	X - M Bal
1988		55,000	-55,000
1989	748,000	51,214	696,786
1990	566,191	2,177,787	-1,611,596
1991		529,089	-529,089
1992		397,628	-397,628
1993		1,067,624	-1,067,624
1994		3,271,326	-3,271,326
1995	206,570	8,628,713	-8,422,143
1996		91,548,707	-91,548,707
1997	115,101	7,918,193	-7,803,092
1998		13,533,045	-13,533,045
1999		7,385,337	-7,385,337
2000		15,298,627	-15,298,627
2001		14,056,686	-14,056,686
2002		14,020,203	-14,020,203
2003	30,000	12,054,378	-12,024,378
2004	193	14,309,682	-14,309,489
2005		12,071,482	-12,071,482
2006		12,344,403	-12,344,403
2007		29,207,712	-29,207,712
2008	7,547	42,136,183	-42,128,636



Steel Bars (HS 7215) - Value in US dollars			
	Exports	Imports	X - M Bal
1988	30,000		-70,618
1989		100,618	-110,302
1990		110,302	-654,391
1991		654,391	-161,496
1992		161,496	-561,158
1993		561,158	-1,662,294
1994		1,662,294	-1,716,861
1995		1,716,861	-1,995,347
1996		1,995,347	-2,113,904
1997		2,113,904	-828,169
1998		828,169	-173,790
1999		173,790	-637,018
2000		637,018	-974,084
2001	96,525	974,084	-607,226
2002		703,751	-589,451
2003		589,451	-432,707
2004		432,707	-2,153,581
2005		2,153,581	-8,448,557
2006		8,448,557	-13,947,749
2007	20,400	13,947,749	-14,245,200
2008		14,265,600	-14,265,600

Steel Bars (HS 7215) - Volume in Kg			
	Exports	Imports	X - M Bal
1988	30,000		-162,213
1989		192,213	-211,866
1990		211,866	-1,413,187
1991		1,413,187	-1,055,776
1992		1,055,776	-1,364,717
1993		1,364,717	-3,803,600
1994		3,803,600	-3,808,425
1995		3,808,425	-5,200,386
1996		5,200,386	-6,853,284
1997		6,853,284	-3,078,065
1998		3,078,065	-532,061
1999		532,061	-2,273,376
2000		2,273,376	-3,528,085
2001	96,525	3,528,085	-2,343,047
2002		2,439,572	-1,798,189
2003		1,798,189	-828,143
2004		828,143	-4,457,379
2005		4,457,379	-15,909,247
2006		15,909,247	-22,795,933
2007	20,400	22,795,933	-56,170,326
2008		56,190,726	-56,190,726

Steel Bars (HS 7221) – Value in US dollars			
	Exports	Imports	X - M Bal
1988			0
1989			0
1990			0
1991			0
1992			0
1993		3,091	-3,091
1994		4,453	-4,453
1995		33,546	-33,546
1996			0
1997		118,708	-118,708
1998			0
1999			0
2000		8,016	-8,016
2001			0
2002			0
2003		933	-933
2004			0
2005			0
2006			0
2007		42,004	-42,004
2008		21,084	-21,084

Steel Bars (HS 7221) - Volume in Kg			
	Exports	Imports	X - M Bal
1988			0
1989			0
1990			0
1991			0
1992			0
1993		14,000	-14,000
1994		8,687	-8,687
1995		68,460	-68,460
1996			0
1997		307,937	-307,937
1998			0
1999			0
2000			0
2001			0
2002			0
2003			0
2004			0
2005			0
2006			0
2007			0
2008			0



Steel Bars (HS 7222) – Value in US dollars			
	Exports	Imports	X - M Bal
1988			0
1989		17,946	-17,946
1990		751	-751
1991			0
1992			0
1993		33,617	-33,617
1994		399,222	-399,222
1995		906,413	-906,413
1996		112,140	-112,140
1997		183,041	-183,041
1998		9,800	-9,800
1999		17,385	-17,385
2000		100,630	-100,630
2001		43,881	-43,881
2002		101,611	-101,611
2003		107,884	-107,884
2004		207,461	-207,461
2005	746	190,756	-190,010
2006		445,277	-445,277
2007		947,484	-947,484
2008	11,431	1,875,838	-1,864,407

Steel Bars (HS 7222) - Volume in Kg			
	Exports	Imports	X - M Bal
1988			0
1989		24,257	-24,257
1990		1,437	-1,437
1991			0
1992			0
1993		87,108	-87,108
1994		882,596	-882,596
1995		1,745,198	-1,745,198
1996		225,061	-225,061
1997		523,818	-523,818
1998		16,529	-16,529
1999		40,226	-40,226
2000		257,556	-257,556
2001		132,685	-132,685
2002		192,377	-192,377
2003		311,614	-311,614
2004		1,169,839	-1,169,839
2005	182	269,623	-269,441
2006		850,307	-850,307
2007		1,000,177	-1,000,177
2008	18,605	1,946,240	-1,927,635

Steel Bars (HS 7227) – Value in US dollars			
	Exports	Imports	X - M Bal
1988			
1989			
1990			
1991			
1992		4,762	-4,762
1993		123,407	-123,407
1994		381,888	-381,888
1995		212,204	-212,204
1996		60,584	-60,584
1997		112,716	-112,716
1998		17,232	-17,232
1999		71,187	-71,187
2000		10,520	-10,520
2001		1,088	-1,088
2002		2,935	-2,935
2003		520,271	-520,271
2004		1,347,970	-1,347,970
2005		32,432	-32,432
2006		41,637	-41,637
2007		360,441	-360,441
2008		551,826	-551,826

Steel Bars (HS 7227) - Volume in Kg			
	Exports	Imports	X - M Bal
1988			0
1989			0
1990			0
1991			0
1992		23,750	-23,750
1993		333,828	-333,828
1994		852,125	-852,125
1995		505,375	-505,375
1996		150,957	-150,957
1997		339,000	-339,000
1998		41,566	-41,566
1999		245,601	-245,601
2000		23,233	-23,233
2001		525	-525
2002		9,923	-9,923
2003		1,438,359	-1,438,359
2004		2,511,304	-2,511,304
2005		65,914	-65,914
2006		80,178	-80,178
2007		595,142	-595,142
2008		682,031	-682,031



Steel Bars (HS 7228) – Value in US dollars			
	Exports	Imports	X - M Bal
1988			-32,874
1989		32,874	-1,647
1990		1,647	-3,952
1991		3,952	-5,779
1992		5,779	-49,825
1993		49,825	-319,326
1994		319,326	-713,017
1995		713,017	-895,988
1996		895,988	-622,016
1997		622,016	-1,053,436
1998		1,053,436	-1,931,733
1999		1,931,733	-599,077
2000		599,077	-629,107
2001		629,107	-3,137,518
2002		3,137,518	-4,452,890
2003	4,524	4,452,890	-2,274,775
2004		2,279,299	-2,944,073
2005		2,944,073	-1,098,274
2006		1,098,274	-3,469,556
2007		3,469,556	-4,492,386
2008		4,492,386	-4,492,386

Steel Bars (HS 7228) - Volume in Kg			
	Exports	Imports	X - M Bal
1988			-53,270
1989		53,270	-2,750
1990		2,750	-656
1991		656	-7,971
1992		7,971	-157,084
1993		157,084	-959,659
1994		959,659	-1,459,420
1995		1,459,420	-2,225,181
1996		2,225,181	-1,670,681
1997	9,812	1,670,681	-3,973,315
1998		3,983,127	-8,231,381
1999	142,789	8,231,381	-2,339,655
2000		2,482,444	-2,359,457
2001		2,359,457	-12,529,919
2002		12,529,919	-14,682,457
2003		14,682,457	-4,711,936
2004		4,711,936	-6,996,320
2005		6,996,320	-2,426,051
2006		2,426,051	-6,103,608
2007		6,103,608	-5,150,902
2008		5,150,902	-5,150,902

ANNEX E: List of Persons Interviewed and Meetings

Date	Meeting	Name
Monday 28 Sept 2009	Foreign Trade Policy Department (FTPD), MOIC	Mr. Bounsom Phommavihane, Director General, Foreign Trade Policy Department Mr. Santisouk Phounesavath, Deputy Director, Multilateral Trade Policy Division, FTPD
	Import and Export Department, MOIC	Dr. Laohoua Cheuching, Deputy Director General, Import-Export Department, and Trade Officers
	Domestic Trade Department, MOIC	Mr. Aketisack Oudomhack, Trade officer, Domestic Trade Department Mr. Phonekeo Phengsouvanh, Domestic Trade Department
	Department of Production and Trade Promotion, MOIC	Mme. Anoumone Kittilath, Deputy Director, Department of Production and Trade Promotion
	UNDP	Ms. Phanchinda Lengsavad, Head of Poverty Reduction unit/Assistant Resident Representative
	UNDP	Dr. Kheungkham Keonuchan, head of UNIDO Operations
	UNDP	Mr. Robert Glofcheski Senior Economist Advisor
Tuesday 29 Sept 2009	Department of Statistics/MPI	Dr. Samaychanh Bouphe Director General Dept. of statistics (Tel. 216656, 214740)
	Lao Cement Co. Ltd	(Nongbone road, Vientiane, Tel: 21-412111,451116)
	Lao Cement Industry, Co Ltd	(014 Kaysone Phomvihane Rd Sivilay Vientiane, Tel: 21 7202 76).
Wednesday 30 Sept 2009	Customs Department	Mr. Ardsapangthong Siphandon Deputy Director General Tel. 312 810, 223 522/5; Fax 223 521 Third floor
	Department of Intellectual Property, Standardization and Metrology in NOST: for TBT Enquiry Point.	Mr. Latsamy, head of General Affair Divison. 020 5698828 (Tel. 240784/243404-5)
	Support to the National Assembly for information on program to make	Mr. Frank Boulin Tel: 417067



	Lao's laws WTO consistent.	
Thursday 01 Oct 2009	World Bank	Mr. Richard Record Trade Specialist, World Bank
	European Commission	Mrs.Khankeo Mounvong Programme Officer
Friday 02 Oct 2009	Cleaner Production UNIDO	Mr. Vilaisak National Project Coordinator
	Lao Brewery Company Limited	
Tuesday 06 Oct 2009	Focal Point in MOIC of PRSO	Mr. Sirisamphanh Vorachith Deputy Permanent Secretary
	Department of Industry	Mr. Manohack Rasachack Deputy Director General
Wednesday 07 Oct 2009	Vientiane Steel Industry	Mr. Phisith Sayathith Tel:820 388, 820 377; 020 5505 289 Email: info@vsi-group.com
Friday 09 Oct 2009	Preliminary Finding Meeting	Mme. Khemmani Pholsena, Vice Minister of Industry and Commerce, Project Executive and the project team of MOIC and UNDP



ANNEX F: References

- Anderson, K., and A. Valdes, "Distortions to Agricultural Incentives in Latin America". Washington, DC. World Bank, 2008
- Anderson, K., and W. Martin, "Distortions to Agricultural Incentives in Asia". Washington, DC. World Bank, 2009.
- Anderson, K., W. Martin and Van Der Mensbrugge, "Market and Welfare Implications of the Doha Reform Scenarios", In Agricultural Trade Reform and the Doha Development Agenda, edited by K. Anderson and W. Martin, Washington D.C.: World Bank, 2005;
- Decree of the President of the Lao People's Democratic Republic on the Promulgation of the Value-Added Tax, Vientiane, 16 January 2007.
- Economic and Social Commission for Asia and Pacific (ESCAP), "Border Trade and Cross-Border Transactions of Selected Asian Countries", New York: United Nations, 1997.
- Francois, J., "Assessing the Results of General Equilibrium Studies of Multilateral Trade Negotiations". Policy Issues in International Trade and Commodities Study Series 3, United Nation Conference on Trade and Development, Geneva: UNCTAD, 2000
- Francois, J., H. Van Meijl, and F. Van Tongeren, "Trade Liberalization and Developing Countries under the Doha Round". CEPR Discussion Paper No. 4032, 2003.
- Fund for Reconciliation and Development, "Summary of the US-Lao NTR Study Tour". Available: <http://www.ffrd.org/LaoTrade/NTRSummary.htm>.
- Gunawardana, P.J. , and S. Sisombat, "Trends and Patterns of Foreign Direct Investment in Lao PDR". School of Applied Economics and Centre for Strategic Economic Studies, and Victoria Graduate School of Business, Victoria University, January 2008.
- Harrison, G.W., T.F. Rutherford and D.G. Tarr (1996), 'Quantifying the Uruguay Round', in The Uruguay Round and the Developing Countries, edited by W. Martin and L.A. Winters, Cambridge: Cambridge University Press.
- International Iron and Steel Institute, "World Steel in Figures". Washington, DC, 2006.
- International Monetary Fund, "Lao People's Democratic Republic: Selected Issues and Statistical Appendix". Country Report No. 07/359, November 07, 2007
- Kakwani, N., and Ernesto M. Pernia, "Pro-Poor Growth and Income Inequality". Asian Development Bank, October 2000.
- Kennett, M., S.J. Evenett, and J. Gage, "Evaluating WTO Accessions: Legal and Economic Perspectives", 2005.
- Komoto, G., and S. Stone, "Determining Poverty Impacts on Lao People's Democratic Republic and Cambodia: Reconciling Household and GTAP Data". ADBI Working Paper Series, No. 141, July 2009.
- Kyophilavong, P., "Analyzing the effect of AFTA on Lao economy: Macroeconomic model approach". National University of Laos, Faculty of Economic and Management. Paper prepared for the ESRI Asia Workshop on Economic Modeling on Deepening Interrelationships among Asian Countries, held on November 30, 2004 in Bangkok, Thailand.
- Lao-German Small Enterprise Development (SED), "Small and Medium Enterprises in the Lao



- PDR: The Results of a National Survey”. 1995
- Litsamy Latsavong and Margarete O. Biallas, “Lao PDR: Financial Sector Diagnostic”. IFC/MPDF, June 2007.
- Lord, M., “Trade Related Policies and Practices in Honduras”. Tegucigalpa, February 2001.
- Lord, M., and V. Ahmadov, “Azerbaijan’s WTO Accession Process and Its Potential Impact on Vulnerable Non-Competitive Segments of the Economy”. Prepared for USAID/Azerbaijan. Baku, October 2008.
- Lubker, M., G. Smith, and J. Weeks, “Growth and the Poor: A Comment on Dollar and Kraay”. *Journal of International Development*. 14, 555–571 (2002). Available: <http://siteresources.worldbank.org/DEC/Resources/LubkerSmithWeeks.pdf>
- Michalopoulos, C., “WTO Accession”. World Bank, 2001.
- Ministry of Industry and Handicraft (MIH) and United Nations Industrial Organization (UNIDO), “Lao PDR: Medium-Term Strategy and Action Plan for Industrial Development”. Lao PDR, Final Report, 2003.
- Ministry of Industry and Handicraft (MIH) and United Nations Industrial Organization (UNIDO), “Survey of Industrial Establishments and Small Scale Manufacturing Establishments”. Lao PDR, 1999.
- Ministry of Planning and Investment, reported in Department of Statistics, “Lao PDR: Statistical Yearbook, 2008”. Vientiane, 2009.
- Multi-Donor Trust Fund, “Trade Development Facility (P109702), Aide Memoir of the Joint Appraisal Mission by the World Bank, European Commission, and Australia”. October 22-26, 2007.
- Rasphone, S., et al, “Protection of the Lao Cement Industry in the Wake of Trade Liberalization”. Vientiane, National Economic Research Institute (NERI), undated.
- Rose, A.K., “Do We Really Know that the WTO Increases Trade?”. *American Economic Review* 94, 1: 98-114, 2003.
- Sato, H., “The Iron and Steel Industry in Asia: Development and Reconstruction”. Institute of Developing Economies, Discussion Paper No. 210, August 2009.
- Sengkeo Kingsada Consulting Company Limited, “Mineral Exports, a Contribution to Lao Development”. Technical Background Paper for the Third National Human Development Report Lao PDR 2006, Vientiane 2006.
- Singh, H., and K.W. Jun, “Some New Evidence on Determinants of Foreign Direct Investment in Developing Countries”. Unpublished, 2004
- Subramanian, A., and S.J. Wei, “The WTO Promotes Trade: Strongly but Unevenly”. NBER Working Paper No. 10024, 2003.
- UNDP, “Capacity Building and Technical Support to Laos in the World Trade Organization Accession Negotiation”. Ministry of Industry and Commerce and United Nations Development Programme, in Partnership with Integrated Framework Core Agencies Proposal project ID 00056639, [undated].
- UNDP, “Capacity building for MOIC’s Department of Import and Export (DIMEX) in Rules of Origins (ROO), Product Specific Rules (PSR) and Operational Certification procedures (OCP)”. Ministry of Industry and Commerce and United Nations Development Programme, in Partnership with Integrated Framework Core Agencies, Project ID 00056640, [undated].



- UNDP, “International Trade and Human Development: Lao PDR 2006”. National Human Development Report, Vientiane, 2006.
- UNDP, “National Human Development Report: International Trade and Human Development”. Lao PDR 2006.
- UNIDO, “A Comprehensive Framework to Foster Economic Initiative in LAO PDR; Lao PDR: Medium-term Strategy and Action Plan for Industrial Development, UNIDO Integrated Programme for LAO PDR: Vientiane, 2003.
- UNIDO, “Lao PDR: Medium-Term Strategy and Action Plan for Effective Industrial Development”. UNIDO Integrated Programme for Lao PDR, May 2003.
- Wacziarg, R., and K.H. Welch, “Trade Liberalization and Growth: New Evidence”. NBER Working Paper Series No. 10152, December 2003
- Whalley, J., “What Can the Developing Countries Infer from the Uruguay Round Models for Future Negotiations”. Policy Issues in International Trade and Commodities Study Series 4, United Nation Conference on Trade and Development, Geneva: UNCTAD, 2000.
- Wickham, Mark, “Regional Economic Development: Exploring the ‘Role of Government’ in Porter’s Industrial Cluster Theory”. University of Tasmania. CRIC Cluster conference. Beyond Cluster- Current Practices & Future Strategies, June 30-July 1, 2005.
- World Bank, “Building Export Competitiveness in Laos: Background Report”. Washington, DC: The World Bank. East Asia PREM, November 2006.
- World Bank, “Lao PDR: Multi-Donor Trust Fund for Trade-Related Assistance: ‘Trade Development Fund’ (TDF). Concept Note and Program Brief”. June 25, 2007.
- World Bank, “Reducing Investment Climate Constraints to Higher Growth”. Lao People’s Democratic Republic, Private Sector and Investment Climate Assessment, Asian Development Bank and World Bank, 2007
- World Bank, “The East Asian Miracle”. Washington, DC, 1993.
- World Trade Organization document WT/ACC/SPEC/LAO/3 (restricted), October 2007.
- World Trade Organization, “Accession of Least-Developed Countries”. Document WT/L/508, 20 January 2003.
- WTO Secretariat, “Accession of the Lao PDR to the World Trade Organization: Factual Summary of Points Raised”. JOB(07)/160. 26 October 2007.
- WTO Secretariat, “Laos turns to future WTO membership commitments”. WTO: 2009 News Items. 14 July 2009. Available: http://www.wto.org/english/news_e/news09_e/acc_lao_14jul09_e.htm.
- WTO Secretariat, Document WT/ACC/SPEC/LAO/3 (restricted), October 2007
- Wu, John, “The Mineral Industry of Laos”. U.S. Geological Survey, U.S. Department of Interior, September 2007