Swiss Agency for Development and Cooperation

(Laos Program)

Lao PDR Macroeconomic Monitor: The "Dutch disease" and Its Indicative Consequences

A Semiannual Report

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The Overall Picture of Macroeconomic Performance

Lao economy experienced another robust year. In 2012, GDP growth was estimated at between 7.9% (ADB) and 8.2% (WB), unemployment was expected to be below 3%, while Consumer Price Index (CPI) declined to 4.3%, from 7.6% in 2011.[1] Nominal GDP expanded from $US8,194 million in 2011 to $US9,430 million in 2012, and GNI per capita rose to $US1,300, from $US1,130 in 2011 (WB). The kip, in 2012, strengthened 2.2% against the baht and 0.25% against the US dollar. Key drivers of economic growth include construction, manufacturing, mining, hydropower and services.

Infrastructure projects that include the $3.7 billion Hongsa lignite thermo power plant in Sayaboury Provinces, a number of new hydropower projects in the provinces, road works, facility expansion for international events and housing investment projects in the Vientiane Capital were major players in construction growth. Although garment exports declined by as much as 25% to $173 million, according to ADB (2013) report, manufacturing was boosted by growth in construction, particularly in the production of cement and other construction materials.

The industry sector continued to take the lead, growing 14%, according to ADB, with mining and hydropower taking the lead. Copper output by the country's two largest producers, with combined output of 90% of the total, expanded 8% to 149,500 tons. Gold output increased 61% to 206,240 ounces, and silver output grew 15% to 616,680 ounces, according to ADB (2013) report. Hydropower output grew 29% to 13.8 billion kilowatt hours, according to ADB (2013).

The service sector in 2012 as a whole grew 8% (ADB), boosted by a jump in the visitor number of 22%, reaching 3.32 million, leading to increased demand for food, accommodation and transportation services. The increased demand from the tourism sector combining with expanded domestic demand were the major stimuli for growth in wholesale and retail trade, and financial and communication services.

The agricultural sector has recovered from the 2011 flood damages and grew 2.5% in 2012. Major contributors to growth in the sector include rice, cassava, maize, poultry and livestock, according to ADB (2013).

Monthly inflation, measured by the Consumer Price Index (CPI), in 2012 declined consistently in the first half of the year, falling from 7.93% in November 2011 to 2.92% in July 2012. However, monthly CPI reversed in August and by the end of December it rose to 4.73% (illustrated in Figure 1). Nonetheless, annual average rate of CPI for the entire 2012 dropped considerably to 4.3%, compared to 7.6% in 2011. Changes in prices of "food and non-alcoholic beverages," "transportation," "housing, water, electricity and fuel" and "restaurants and hotels" groups were the main drivers of changes in CPI. In 2012, while food and transportation groups were driving CPI downward, housing and restaurant groups were driving CPI upward (Figure 2).

The money supply (M2) and domestic credit respectively grew 31% and 36.2%, according to BOL as cited in ADB (2013). Although these growth rates are considered high, they both have

[1] While currently Laos does not have an unemployment monitoring system, the 2010 survey revealed that nationwide unemployment was at 1.9% and 3.2% in urban area. In 2010, GDP grew between 7.5% (ADB) and 8.5% (WB).

declined from previous years; for M2, from 38.9% in 2010 and for domestic credit, from 102.2% in 2009. To further slow down credit growth, as well as to fulfill the wish of the central government to better manage spending on infrastructure projects, the BOL has reduced its direct lending to infrastructure projects.

Figure 1

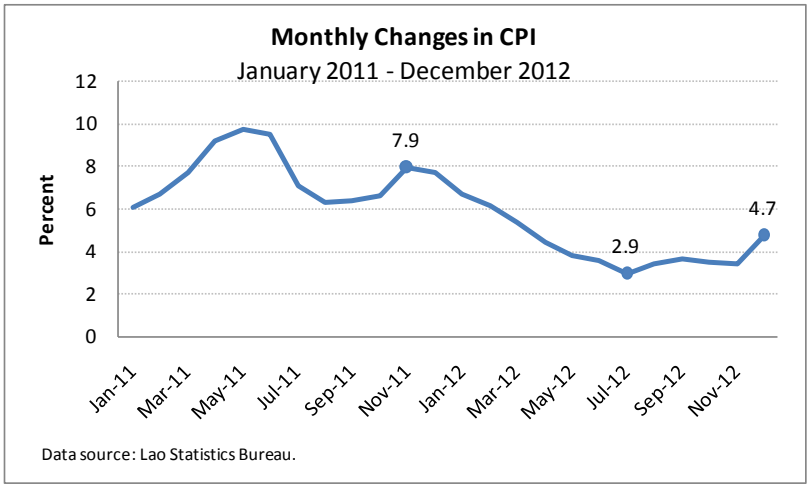
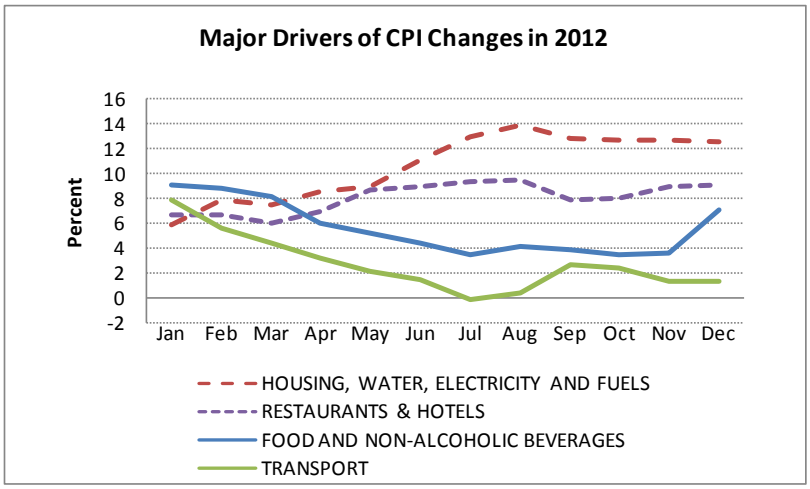


Figure 2



Trade deficit grew in 2012, to between $US1.3 billion (WB) and $US2.1 billion (ADB), as a result of import expansion to between $US4.2 billion (WB) and $US5.4 billion (ADB) while exports grew to between $US2.8 billion (WB) and $US3.4 billion (ADB). Although foreign investment inflows associated with mining, hydropower and real estate projects (much was part of facilities expansion in preparation for the ASEM Summit) and export revenues grew, strong import surge and repatriation of resource revenues have resulted in a balance of payment deficit of 0.7% of GDP (WB). Thus, official reserve declined to between $US617 million (WB) and $US708 million (ADB), which covers between 1.6 (ADB) and 1.7 (WB) months of imports.

The fiscal deficit was narrowed to between 1.5% (ADB) and 2.3% (WB) of GDP in 2012, as government revenue was boosted by strong growth in mining and hydropower revenues, and with increased external grants. Deficit spending in 2013 is expected to increase to 2.7% (WB), but still far below the 5% threshold. The increase is mainly the result of government's commitment to a wage increase of 35% for civil servants, which should raise government spending on wages and compensation from 4.8% to 5.8% of GDP (WB).

Government debt distress has been reclassified from high to moderate, following an IMF-WB joint assessment of Laos' debt sustainability in 2012. The reclassification was justified based on improvement in policy performance from weak to medium, as cited in WB (November 2012).

Resource Sector, Government Revenue and the "Dutch disease"

Growth in the Lao economy has been increasingly driven by the resource sector, specifically mining and hydropower, in a significant way for about a decade. The December issue of WB's economic monitor suggests that the resource sector contributed 2.4% to the overall 2012 GDP growth rate. In the past five years (2008-2012), the resource sector contributed on average 3% to GDP overall growth each year. Going further back over five years (2003-2007), the resource sector contributed on average 1.5% to annual GDP growth rate. Figure 3 illustrates the importance of the resource sector in raising the country's GDP growth rate.

With its growing importance in driving the country's GDP growth, the significance of the resource sector has also been rapidly growing as a source of government revenue. The percent share of government's revenues from domestic source coming from the resource sector in 2011-12 FY was 47.4%, rising from a mere 3.9% in 2003-04 FY, according to an estimate by Menon and Warr (2013). See Figure 4 for illustration of rising share of resource revenues in government's total domestic revenues.

As a result of rapid expansion in hydropower development and mining exploitation, government's revenue from domestic sources grew significantly as percent of GDP, rising from 11% in 2003-04 FY to 19.4% by 2011-12 FY. Except for the three fiscal years between 2008-09 and 2010-11, resource revenues have been the sole contributors to rising government's revenue. Over a period between 2003-04 and 2011-12 fiscal years, resource revenues grew from 0.4% to 9.2% of GDP, according to an estimate by Menon and Warr (2013). Over this same period, non-resource revenues stood relatively still at slightly above 10% of GDP (Figure 5). Resource revenues estimated by Menon and Warr include direct revenues, profit taxes, royalties and dividends.[2]

[2] It should be pointed out that Menon and Warr's estimates of government's yearly resource revenues are higher than those of the World Bank's estimates, as reported in the Bank's Economic Monitor. The WB's estimates are more similar to those of Monon and Warr's direct revenues estimate figures. It is unclear whether the WB's estimates omitted profit taxes, royalties and dividends.

Figure 3

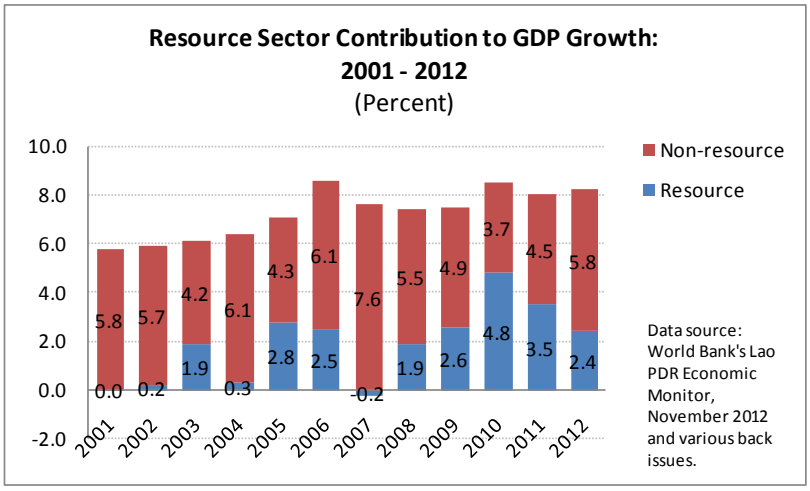


Figure 4

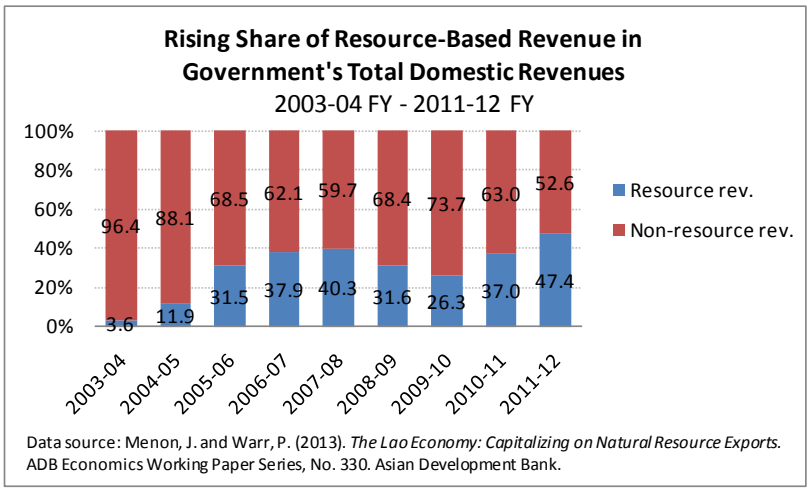
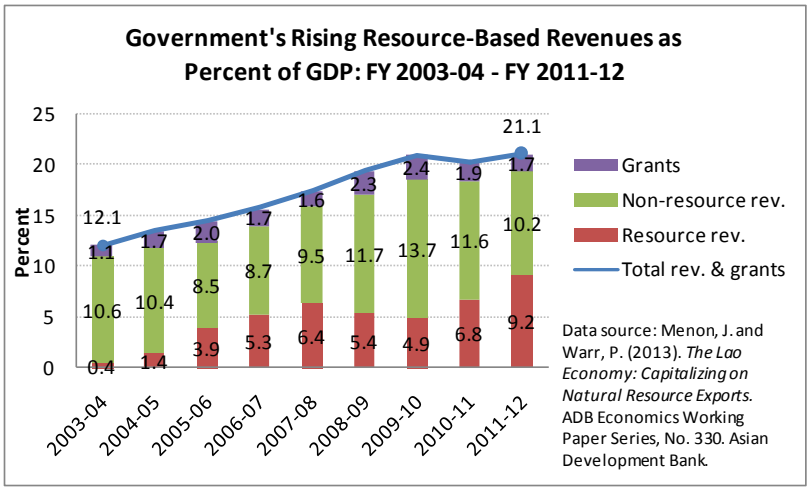


Figure 5



While it is generally desirable that the resource sector has contributed to growth in national income and to increased government revenues which help stabilize the macroeconomic condition, reduce government's financial stress on its various spending obligations, and expand government's capacity to finance the many needed development projects (i.e., infrastructure, education, health, etc.), there are also undesirable consequences. When the massive incomes from the resource sector are rapidly spent, causing the non-tradable sector to boom at the expense of the tradable sector that is going bust, it creates a problem commonly known as "Dutch disease".

Warr, Menon and Yusuf (2010) shown that government spending using resource-based revenues, although have an impact on reducing poverty, especially spending with rural bias, has a negative impact on the non-resource export sector by eroding its competitiveness, a phenomenon commonly known as "Dutch disease." Warr et all suggests that the "Dutch disease" in Laos is a long term phenomenon, not a temporary one. Thus, since the "Dutch disease" produces both winners (in non-tradable sector) and losers (in tradable sector), instead of trying to rescue the losers from loss through a protectionism policy, it is better to assist the losers with finding and engaging in more productive alternatives. This would require training and other readjustment measures.

Menon and Warr (2013) found statistical evidence confirming that the "Dutch disease" has been at work in the Lao economy for some time, as a result of growth in the resource sector. The authors suggested that it will be wiser for government to slow the rate of absorption (spending) of the resource-based revenues to allow time for government to come up with wiser spending plans and be able to more effectively manage the expenditures. They added that Laos' rapid spending of the resource-based revenues can be "dangerous," as lack of accountability in Lao government is widely recognized. Although it is unclear what the authors meant by "dangerous," it is conceivable that, with a lack of accountability, wasteful spending and losses of public funds through corruption are likely.

An example of the "danger" of rapid spending of resource-based revenues Menon and Warr warned is the popular road-work projects with which construction companies awarded (without going through a bidding process) must complete the projects with their own financing, then government repay the construction cost to those companies over a five year period. The common practice has been that the cost of the projects billed to government was inflated twice or more the true cost and, in many cases, the awarded companies did not have either the financial or technical capability to complete the projects. Thus, these companies sold the projects to other companies with technical capability who would then seek financing from banks to carry out the construction work. Such practices do not only encourage corruption and wasteful spending of public funds, they have the potential to drive prices upward, causing inflation. However, recently, the central government has ordered the responsible government bodies to stop this practice.

Who stands to gain and who stands to lose?

The winners and losers in an economy being infected by the "Dutch disease" are owners of specific factors that generally can be divided into those in the non-tradables and tradables sectors. The winners, in addition to those making a direct windfall gain from the booming resource sector and from government's spending using resource incomes, are owners of specific factors in the non-tradables sector; and the losers are those in the tradables sector, excluding the booming resource sector.

The Winners: Non-tradables refer to those that cannot be physically traded internationally, mainly land-based development projects, such as real estate projects. Rapid rises in disposable incomes of those directly benefitted from the booming resource sector and of those making windfall gains from government's rapid spending using resource incomes often made their way to land purchases and real estate development projects, as these were viewed to be relatively safe investment options. This makes land owners the winners who make windfall gains from land price increases. In addition, there are those selling goods and services to these real estate projects stand to make gains from this boom. They are owners of goods and skills demanded by the real estate development projects, such as cement and other construction materials; construction, engineering, carpentry, and electrical expertise. Additionally, individuals making gains directly and indirectly (land owners and business owners and workers in the construction supply chain) from the booming resource sector would spend their disposable incomes on goods and services, benefiting other suppliers. This is part of an economic process called the "multiplier effect," which started from spending by the resource sector, then by those directly benefited from the booming resource sector and government spending programs using resource revenues.

Other clear winners are import businesses, as domestic currency appreciation is an accompanying part of the "Dutch disease." Growing inflows of foreign exchanges associated with growth in resource exports, foreign investments (which, for Laos, has continually been dominated by the resource sector) and foreign aids have resulted in the kip to continue to strengthen against major foreign currencies as demand for kip grew. In 2012, the kip appreciated 0.25% against the US dollar and 2.2% against the baht, based on nominal market rates.[3] However, going back to 2005, the kip has appreciated 24.9% against the US dollar, with kip-dollar nominal exchange rate dropping steadily from kip10,669 per dollar to kip8,013 per dollar (Figure 6). Over this same period, the kip also slightly appreciated against the baht, by 2.9%, but with a much different characteristic (Figure 7).

[3] These percent changes were calculated from BOL exchange rates report. For both kip-USD and kip-baht rates, they are the averages of year-average mid-rate in the parallel market and year-average mid-rate in commercial banks. Mid-rate for a given day or year refers to an average rate of buying and selling rates for that given day or year.

Figure 6

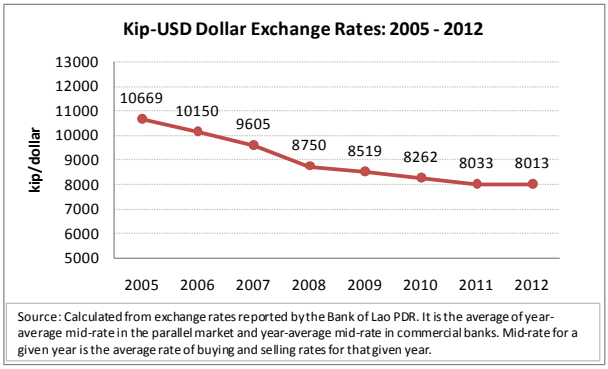
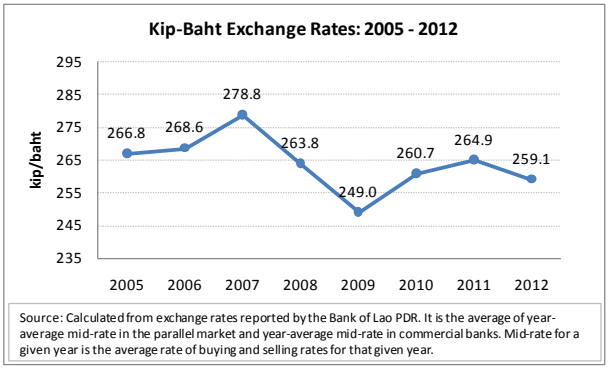


Figure 7



Lao government continues its policy of managed-float, with a 5% floor and ceiling allowable for exchange rate fluctuation within one year, in order to maintain a stable exchange rate against major foreign currencies and macroeconomic stability. Given the growing inflows of export revenues, especially from the resource sector, capital for foreign investment projects and aid monies, it can also be argued that the kip may have appreciated even more had the central bank let the kip freely floated.

While this policy helps keep inflation in checked and is clearly beneficial to the economy as a whole, the appreciation of the kip has conflicting effects. While a stronger kip makes imports cheaper, given that prices of imports in foreign currencies remained unchanged, benefitting import businesses, consumers, and (may be) some domestic-market-oriented producers that must import material inputs, equipment and machinery, it also erodes the competitiveness of Lao export sector by raising costs associated with local inputs. Even for domestic-oriented producers, it is unclear whether it is advantageous with a stronger kip. While a stronger kip holds down the cost of imported material inputs, equipment and machinery, it also makes imported consumer goods that domestic producers must compete cheaper. With kip appreciation, the clear winners are importers and kip-earning consumers, at least until the economy falters if proper adjustments did not take place.

The Losers: The appreciation of the kip against the US dollar has been increasingly making exports destined for any market more difficult, because most international trades are paid in US dollar. Exporters earn foreign exchange that is depreciating against the kip. With each unit of foreign exchange earned can be converted for less kip, exporters' real operation costs increased as a result, given other things remain constant—namely input prices in local currency and output prices in foreign exchange. In a competitive market, producers' ability to set prices is extremely limited. Thus, exporters often absorb higher cost of local inputs instead of passing it to buyers by raising prices. This makes the export-oriented sector a clear loser, especially those with relatively more domestic inputs and a lack of the ability to set their own product prices, and discourages especially the export-oriented non-resource sector. Some relevant examples of industries that have been adversely affected by the continual appreciation of the kip are the

garment industry, other light manufacturing, coffee and some other primary, semi-processed and processed agricultural products.

Lao garment industry, an example of the victim of the "Dutch disease": Between 2006 and 2012, Lao garment industry exported more than 90% of its output to the European Union (more than 80%) and the United States (more than 10%), with the remaining to Japan, Canada and elsewhere.[4] Most Lao garment exports went to the EU as producers taking advantage of duty-free access to the EU market, and to the US, especially after 2006, because of the establishment of the Normal Trade Relation, signed in 2005, between the US and Laos. Lao garment industry experienced continued output and export growth until 2008, when the global financial-turn-economic crisis began, but export dropped in the following year, resurged in 2010 and 2011, but dropped again in 2012. Figure 8, which shows Lao garment exports to the EU and US markets, illustrates Lao garment annual export fluctuations between 2006 and 2012. Although it does not contain the total export of Lao garment, with more than 90% of the market share, it is sufficient to provide a good picture of the industry's export performance.

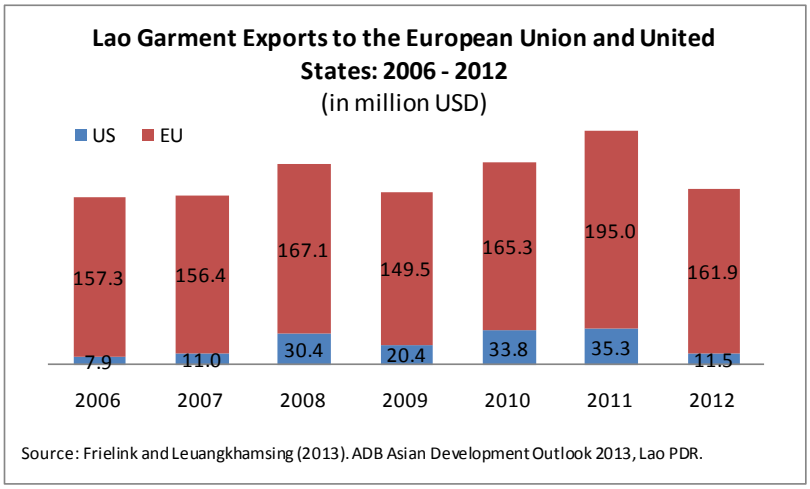
The 14% drop of Lao garment export to the EU and US in 2009 was unlikely to be the direct result of kip appreciation, given that the global economic crisis started in 2008. However, the explanation to the 25% drop to these markets in 2012, offered by Frielink and Leuangkhamsing (2013), in ADB Asian Development Outlook 2013, that it was the result of weak demand and skilled labor shortages is not convincing. In 2012, neither the EU nor US economy was doing worse than in the two preceding years when Lao garment exports to these markets were growing (Figure 8).

World Bank's survey (July 2012) of garment workers found that poor working conditions and pay were the common complaints for reasons of quitting. Four most common reasons for quitting include, first, "to take another job at another garment factory," second, to "return to home community," third, "because of family responsibilities," and fourth, "to take another job in another industry or sector." A study conducted by the National Statistical Center in 2006 (now, Lao Statistical Bureau) suggested that an average hourly wage for garment worker in Laos was only 17.6% of an average hourly wage in the same industry in China.[5] In fact, low wage has often been used by officials as a reason to attract foreign investment in Laos. Thus, skilled labor shortages in the garment industry can hardly be a sound explanation for the export plunge in 2012. It would be more valid to argue that skilled labor shortage is a bottleneck for the Lao garment industry to expand.

[4] Estimated based on data from Frielink and Leuangkhamsing (2013), in ADB Asian Development Outlook 2013.

[5] In Laos, an average hourly wage was equivalent to $US0.12 while it was $US0.68, according to the study.

Figure 8

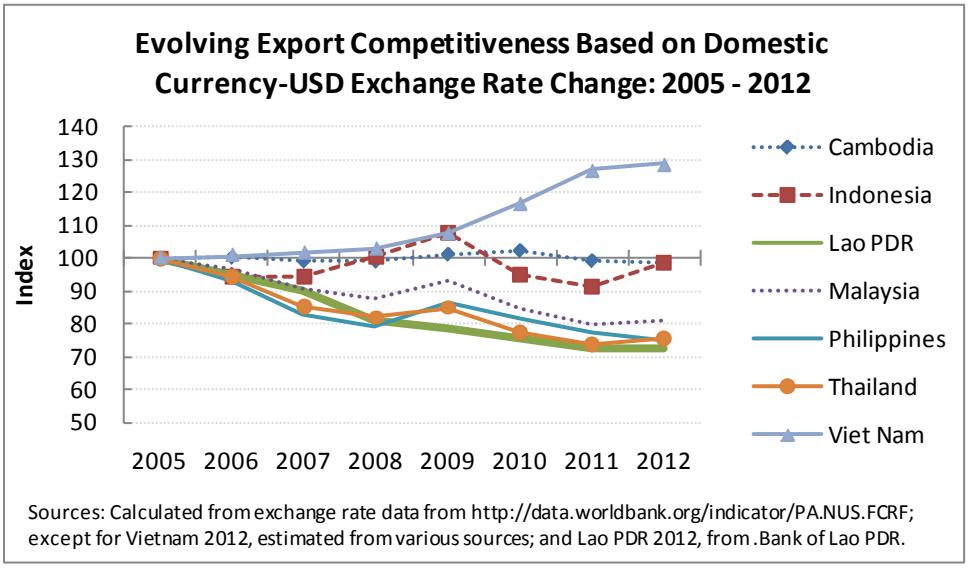


The question is why didn't garment factories raise wages and improve working conditions to keep or attract skilled workers? One reason is that Lao garment worker productivity is low. Labor productivity in Laos is lower than in neighboring countries such as Vietnam and Cambodia, and substantially lower than in Thailand, China and Malaysia (World Bank, July 2012). In addition, it is more costly and could take twice more time to export from Vientiane than from Bangkok.[6] It also sensible to say that garment factories in Laos must also pay more for raw materials than those located in Thailand, Vietnam or Cambodia, due to distance. Given disadvantages associated with money and time costs involving shipments and with relative productivity, Lao garment producers must keep wages low in order to be competitive.

Despite the fact that these well-recognized disadvantages have been variables limiting the level of competitiveness of the Lao garment industry, the continued appreciation of the kip since 2006 has been increasingly putting considerable pressure on the Lao garment industry. To comprehend this more clearly, Lao currency is compare with selected ASEAN currencies on their performance against the US dollar and illustrated in Figure 9. It illustrates how exchange rate changes affect relative competitiveness of exporters. In Figure 9, with 2005 as the base year, any graph rises above (or falls below) the 100-line indicates an improvement (or deterioration) of the level of competitiveness of the country for which the graph represents. However, what is important for our immediate purpose is a change in the level of competitiveness relative to those of other countries. Changes in the level of competitiveness here are purely determined by exchange rate changes.

[6] As cited in World Bank's garment labor standard survey (July 2012), exporting "a standard 40ft container from Vientiane adds as much as 45 percent to total shipping costs to the final destination," and could take twice longer than exporting from Bangkok.

Figure 9



Recently, between 2005 and 2012, many ASEAN currencies were appreciating against the US dollar, mainly as a result of US dollar falling value against most major currencies around the world. Even with other currencies in the region also appreciated against the US dollar, except for Vietnam dong, Lao exporters have lost competitiveness against other ASEAN countries through currency appreciation, because the kip appreciated against the US dollar more than other ASEAN currencies. Over this period, against the US dollar, Vietnamese dong depreciated 31.7% while the Lao kip appreciated 24.9%. Thus, between 2005 and 2012, the level of competitiveness of exporters in Laos has deteriorated by as much as 56.6% against exporters in Vietnam. Over this period, Laos' level of export competitiveness, based on relative exchange rate change, has deteriorated against all selected ASEAN countries (Cambodia, Indonesia, Malaysia, Philippines, Thailand and Vietnam).

If the negative effect of kip appreciation on (raising cost to) the export-oriented sector outweighs the positive effect on (lowering cost to) the domestic-oriented sector, and without efficiency gain from elsewhere within the export-oriented sector to compensate for the negative exchange rate effect, the economy is likely to be worse off in the long run. In any case, with kip appreciation, the export-oriented sector operating in a competitive world market is worse off.

With a sluggish non-resource export-oriented industries and import-competing industries, the government will be pushed deeper into resource sector dependency, an unsustainable path. However, to get out of this path, a monetary policy deliberately making the kip weak could make things worse. A weakening kip will immediately result in inflation and a loss of confidence in the kip, which would lead to other economic problems.

Unemployment

Laos does not have a system of labor monitoring on a regular basis. Thus, data for labor in Laos is scarce and sporadic, which is problematic for monitoring employment. However, the Lao Statistical Bureau (was National Statistical Center, then Department of Statistics) has recently completed a report of the first ever labor force survey, carried out in 2010 with the support of the International Labor Organization.[7]

In 2010, employment was still highly concentrated in agriculture, which absorbed 69.2% of males and 73.5% of females in the labor force, and very little in other sectors outside of agriculture (see Table 1). Even for urban population (not shown in the table), employment in agricultural was still relatively high, with 32.7% for males and 37.2% for females. The industry sector as a whole employed only 8.1% of the labor force while the service sector, including "Public administration and defense" (4.4%), employed only 15.9% of the labor force.

There were more than twice the number of women employed in accommodation and food service (2.6 times) and human health and social work (1.9 times) than there were the number of men. Women also dominated in the wholesale and retail businesses (1.8 times more than men) and "other service activities" (1.6 times more than men). There were also more women than men employed in manufacturing and agriculture and forestry. Men dominated in other occupational areas such as mining and quarrying, electricity and gas, water supply and sewerage, construction, transportation and storage, among others.

In 2010, national average unemployment rate was just 1.9% (see Table 2 for details).[8] Unemployment in urban area, at 3.2%, was higher than the national average, and tends to be higher than in rural area, but still considered relatively low. Rural unemployment was between 0.7% and 1.4% for areas without road and with road, respectively. Although national unemployment was very low, especially in rural areas, the combination of a very high agricultural labor share of 71.3% with a high self-employed rate of 47.9% and unpaid household work of 36.4% together implies that underemployment may have been widespread.

Between the two genders, overall, slightly more females were unemployed (2.0%) than males (1.8%). More females were economically active than males until the age of 24 in all regional classifications—urban, rural with road and rural without road (not shown in the table). After that, generally, the males took over, especially for urban and rural area with road. In rural area without road, more females tended to stay economically active than in other regions. Unemployment rate also tends to be higher among the wealthy (3.8%) than the poorest (0.8%).

[7] LSB (2012).

[8] Individuals were unemployed if they were without a job, either have actively looked for a job or not, in the last seven days prior to the survey (called reference week).

Table 1

Occupation Distribution and Occupation Density of Gender

Occupation	% Distribution			Ratio
	Male	Female	Combine	F/M
Agriculture, forestry and fishery	69.23	73.46	71.33	1.06
Mining and quarrying	0.77	0.28	0.52	0.36
Manufacturing	4.25	5.89	5.07	1.39
Electricity and gas	0.42	0.09	0.25	0.20
Water supply and sewerage	0.17	0.04	0.11	0.27
Construction	4.31	0.38	2.35	0.09
Wholesale and retail trade	6.41	11.31	8.85	1.76
Transportation and storage	1.85	0.26	1.06	0.14
Accommodation and food service	0.33	0.84	0.58	2.57
Information and communication	0.51	0.24	0.38	0.48
Financial and insurance	0.28	0.19	0.24	0.68
Real estate	0.03	0.01	0.02	0.16
Professional, scientific and technical	0.23	0.13	0.18	0.57
Administrative and support service	0.38	0.30	0.34	0.79
Public administration and defense	6.63	2.13	4.39	0.32
Education	2.51	2.27	2.39	0.90
Human health and social work	0.31	0.59	0.45	1.86
Arts, entertainment and recreation	0.27	0.18	0.23	0.66
Other service activities	0.57	0.94	0.76	1.64
Others	0.53	0.48	0.50	0.92

Data source: Lao PDR Labor Force and Using Child Labor Survey, Year 2010, LSB.

Table 2

Lao PDR's Labor Force Participation Rate and Unemployment: 2010

	Labor Force Participation			Unemployment		
	Males	Females	All	Males	Females	All
National	80.8	77.8	79.2	1.8	2.0	1.9
Urban	74.9	69.8	72.3	3.0	3.5	3.2
Rural with road	83.1	80.9	82.0	1.4	1.5	1.4
Rural without road	86.1	86.6	86.4	0.8	0.7	0.7
Vientiane Cap.			71.6	4.8	6.2	5.5
Poorest			85.8	0.9	0.8	0.8
Lower Middle			83.1	1.3	1.4	1.4
Middle			79.1	1.3	1.3	1.3
Upper Middle			77.1	1.9	2.0	1.9
Wealthy			73.9	3.5	4.0	3.8

Data source: Lao PDR Labor Force and Using Child Labor Survey, Year 2010, LSB.

Another important characteristic of the Lao labor force is that the general education level of the labor force is quite low. Only 12.6% of the total labor force had above secondary school education (7.2% with technical school education and only 5.4% with at least college education). Nearly half of the total labor force (48.7%) had only primary school education, and 36.5% had secondary education. This limits the scope for investment to take place, as many types of investment require relatively educated workers. Certain types of production and services require education at the university level, and some require specialized skills and knowledge which Lao

PDR is scarce of. Also, in general, level of education tends to be positively associated with productivity, as more educated workers generally can learn new skills faster than less educated workers.

Poverty and Inequality[9]

With relatively high and sustained economic growth, national poverty rate based on national poverty line, has likely dropped to under 23% by the end of 2012, and is expected to further drop to under 22% by the end of 2013 (Figure 10).[10] Over a 15-year period between 1992/93 and 2007/08, poverty incident dropped steadily from 46.0% to 27.6%, based on national poverty line. However, when Laos' poverty rates were measured based on the international poverty line ($US1.25 per day), the poverty rates were elevated, but also declined steadily from 56.9% for 1992/93 and 37.4% for 2007/08 (Figure 10).

Another important feature of Lao PDR's poverty trends is that, both urban and rural areas experienced a steady decline in poverty, except that it was declining much slower in rural area with road between 1997/98 and 2007/08, although gaps between them remained wide (See Figure 12). In 2007/08 poverty rates in urban, rural with road and rural without road were 17.4%, 29.9% and 42.6%, respectively. At the regional scene, poverty has also reduced markedly in all regions—north, central, south and Vientiane Capital. Poverty reduced most rapidly in the Vientiane Capital (by -54.8%), followed by the south (-50.1%), north (-37%) and central region (-33.8%) over a 15-year period of 1992/93 – 2007/08 (Figure 13).

Figure 10

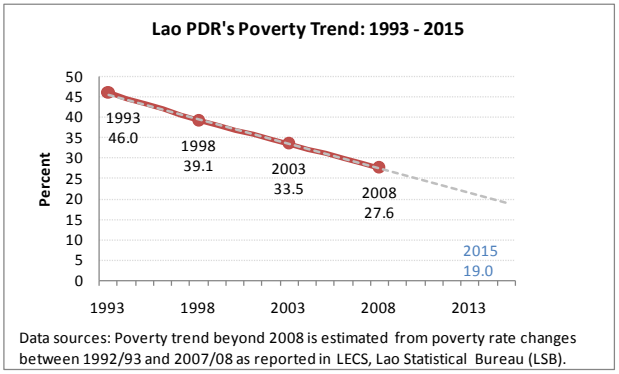
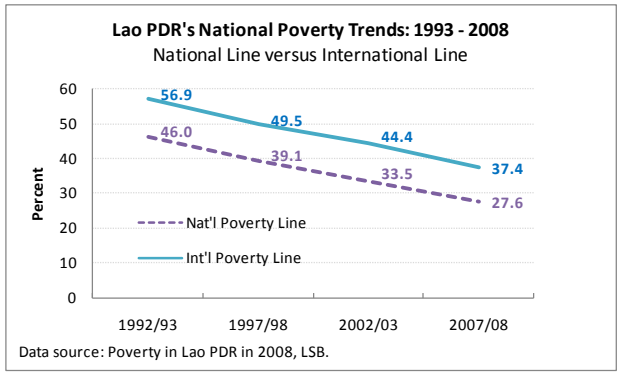


Figure 11



[9] This section is borrowed from Southichack and Phonvisay (2013).

[10] There are two types of poverty lines constructed. The first one is food poverty line, which is the level of income required for food intake to attain 2,100 Cal per person per day. The other poverty line is set based on various income thresholds for national, rural and urban, which include daily food requirement and other everyday necessities. The current poverty thresholds (set for 2010-2015) for national, rural, and urban are respectively set at kip192,000, kip180,000, and kip240,000 per person per month.

Figure 12

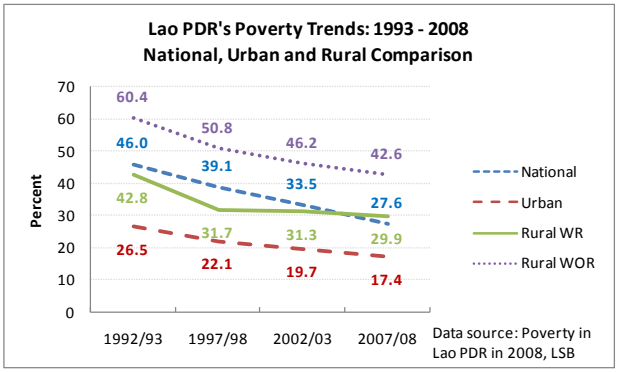
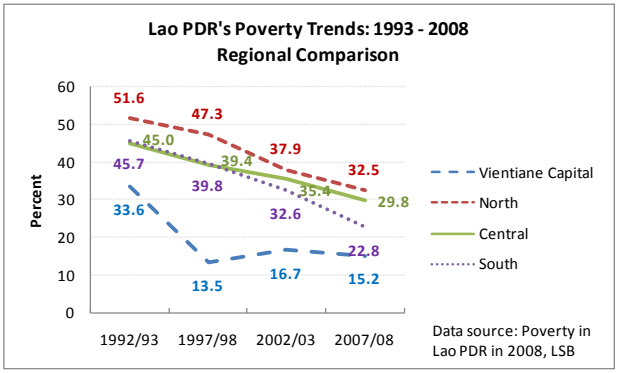


Figure 13



While poverty has been declining across the country, inequality has likely been widening in 2012, given that there was little change in economic growth structure since after the last household survey was conducted in 2007/08. Between the first household survey in 1992/93 and the latest, in 2007/08, consumption inequality was noticeably growing in both rural and urban areas (Figure 14) and in all major regions, except for the south (Figure 15). National inequality, measured by a Gini Index, rose from 30.5 in 1992/93 to 35.4 by 2007/08 while inequalities within urban and within rural areas were converging, particularly since after 1997/98, as a result of inequality in rural area without road rising faster than all other areas, especially after 2002/03.

Figure 14

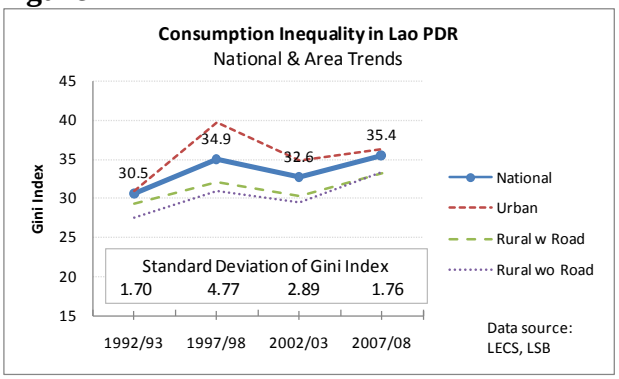
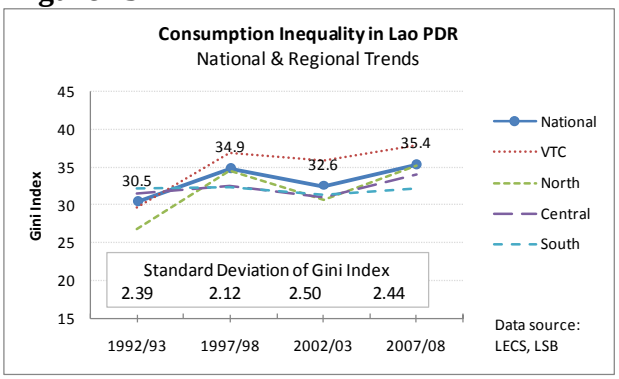


Figure 15



The standard deviation of the Gini Index measuring inequality dispersion across urban and rural with and without road shows that dispersion increased considerably across urban and rural areas during the Asian financial-turn-economic crisis in the late 1990s, with the standard deviation value of the Gini Index rising from 1.70 to 4.77 between 1992/93 and 1997/98 (Figure 14). However, dispersion of the Gini Index across urban and rural areas declined after that, as a result of inequality in rural areas without road rising faster than all other areas, particularly after 2002/03, thus inequality measures in urban and rural areas were converging. That is, inequality in rural areas, especially in rural area without road, has been growing and catching up with the level of inequality in urban area.

The regional scene of consumption inequality displayed a different characteristic from that of urban-rural inequality. The dispersion measured by the standard deviation of the Gini Index across Vientiane Capital, north, central, and south declined slightly during the Asian crisis, from 2.39 in 1992/93 to 2.12, but grew for the next five years, then declined slightly between 2002/03 and 2007/08. Nevertheless, inequality dispersion across regions increased slightly over the entire 15-year period of 1992/93 and 2007/08, with the standard deviation of the Gini Index growing from 2.39 to 2.44 (Figure 15). While inequality in the south remained roughly constant over this 15-year period, inequality in the north which started from a lower level of inequality, grew the fastest, surpassing that of the south and central.

Poverty decline was accompanied by declining food share in household spending. As real income grows, the share of food in the total household expenditure tends to decline, as households increased spending on non-food items essential for everyday living. This has been the case for the Laos. Food in household's total expenditure has diminished considerably, from 64.3% in 1992/93 to 46.1% by 2007/08. More importantly, the decline in food share was mainly a result of a falling share of self-produced food, which accounted for 80% of the overall decline in food share. In 1992/93 the shares of self-produced food and of purchased food respectively were 38% and 26.3%; both respectively declined to 23.4% and 22.7% in 2007/08 (Figure 16). This was attributed to household cash income was growing as farm households were transitioning from self-sufficient farming towards commercial farming as more villages became connected with the market economy. With more roads, electricity, telecommunication gaining distance into rural villages, more affordable personal transportation units (motorcycles) and telecommunication units became available, entering commercial agriculture became less difficult for villagers.

Within food spending, over 1992/93 and 2007/08, the decline in rice share is noticeable while the shares of meat, fish and cooked food increased (Figure 17). Households also have slightly raised their spending shares of other "Starch and bread" (from 1.9% to 2.7%) and "Milk, Butter and Egg" (from 1.1% to 1.4%) in their total food spending over this 15-year period.

Figure 16

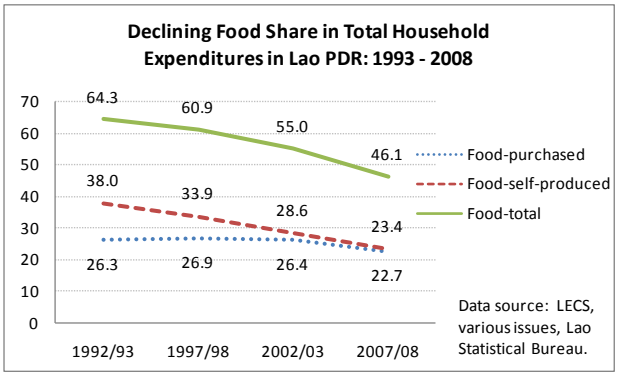
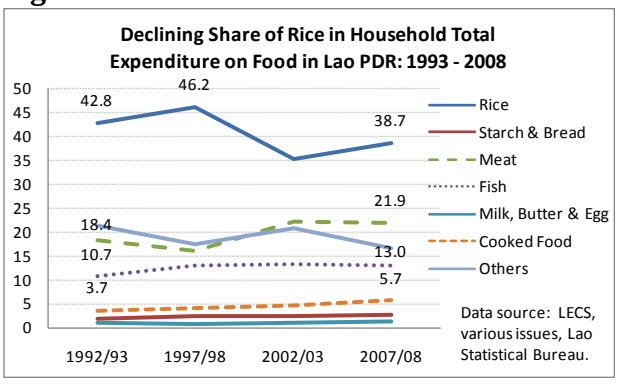


Figure 17

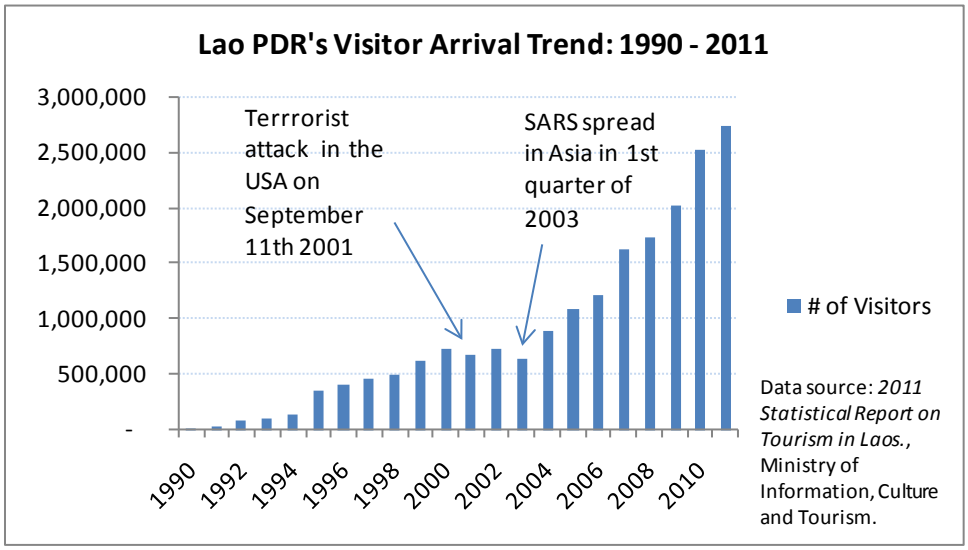


The Service Sector:

The service sector experienced robust growth of 8% (ADB) in 2012, led by tourism which had a 22% growth in the number of visitors, from 2.72 million in 2011 to 3.32 million in 2012, according to the National Tourism Administration (Figure 18). This had provided a supportive condition for growth in the hotel and restaurant, wholesale and retail trade, and transportation businesses. Financial services also played an important role driving growth.

Based on the estimated visitors' expenditure, tourism has been the second largest foreign exchange earner, after mining exports, for the Lao economy. In 2012, tourism earned an estimated amount of $500 million in foreign exchange, an increase of 17.8% from the previous year of $424 million. However, the foreign visitors' expenditure figure provides only part of the total economic contribution of tourism. Approximately, in Laos, ***every dollar spent by visitors contributed a total of $3.30 to GDP*** through direct, indirect and induced impacts; and ***every million dollar spent by visitors directly created 338 jobs. If the indirect and induced impacts are accounted for, a million dollars spent by visitors would create 1,087 jobs in total.*** Direct jobs and incomes, what gets added into GDP, created by visitors spending are jobs and incomes associated with the production of goods and services directly for serving visitors (e.g., jobs and incomes in the hotel industry). Indirect jobs and incomes created by visitors spending are jobs and incomes resulting from the production of goods and services demanded by businesses that directly serve tourists (e.g., production of indigenous variety of chicken meat for restaurants in hotels). Induced jobs and incomes created by visitors spending are those resulting from spending made by individuals earning incomes from producing goods and services that, directly or indirectly, serve the demand of tourists.

Figure 18



The WTTC's estimates that tourism directly contributed US$454.8 million to Laos' GDP in 2011, accounting for 5.8% of the country's total GDP, and created 143,500 jobs,

accounting for 4.9% of the country's total employment. With indirect and induced impacts included, tourism's total contribution to GDP was US$1,417.3 million (18.2%) in that year, and it was responsible for a total of 461,500 jobs, accounting for 15.9% of the total employment in the country.

Tourism, although may be accompanied with undesirable social, cultural and environmental side-effects, is a very important sector in the Lao economy, for its roles in attracting foreign exchange, stimulating domestic production and job creation, and distributing income across business sectors and social lines. The social, cultural and environmental effects of tourism also have positive sides. Locals could also learn social norms and cultures of their visitors and become more tolerant to social diversity. This tends to promote peace, in a very broad sense. There are many examples of positive environmental impact of tourism. One is that tourism tends to promote beautification, cleanliness and improved public sanitation of a town trying to attract tourists. If tourists value natural greenery, as opposed to trekking through a rubber plantation or logged mountains, and if a country values tourism, then natural forest preservation would be promoted.

Tourism has greater backward and forward linkages than other sectors, as tourism is more integrated with the domestic production system. Thus, the economic impact of tourism is greater than most other sectors in the economy, in terms of income generation and job creation. This is supported by the fact that tourism is dominated by MSMEs and they are found in a survey by GIZ (2012) to be more dependent on domestic supply chain. As tourism is dominated by MSMEs, appropriate intervention to promote a sustainable growth in tourism, with environmental, social and cultural protection measures in place, has a relatively high potential of alleviating poverty.

The Agricultural Sector:

Overall, the agricultural sector grew 2.5% (ADB) in 2012, as it recovered from the 2011 flood damages. Major contributors to growth in the sector include rice, cassava (starch), maize, poultry and livestock, according to ADB (2013).

Rice output has been reported to have grown in 2012, compared to its 2011 output of 3.3 million tons (WB). Output grew as a result of combined productivity improvement and land expansion. Table 3 summarizes changes in yield in tons per hectare for rice and other selected crops over two decades.

Livestock production was reported to have increased in 2012 (data not yet available). FAO data shows that meat production from cattle, pigs, goats & sheep and chicken have increased in 2011 (the most current year data were available) while buffalo meat production was unchanged from previous year. Between 2000 and 2011, annual production of buffalo meat grew 17% (from 16,600 to 19,470 tons), cattle meat grew 62% (from 16,400 to 26,500 tons), pig meat grew

131% (from 27,650 to 64,000 tons), goat & sheep meat grew 287% (from 430 to 1666 tons), and chicken meat 110% (from 9,700 to 20,400 tons), according to FAO data.[11] Reflecting growing meat production of large animals and poultry, figures 19 and 20 illustrate annual changes in the per capita stock of live buffaloes, cattle, pigs, goat & sheep, and poultry. The leveling off of the combined per capita stock of live large animals after 2009 (Figure 19) was mainly contributed by the decline in per capita stock of live pigs, resulting from a surge in the number of pigs slaughtered.

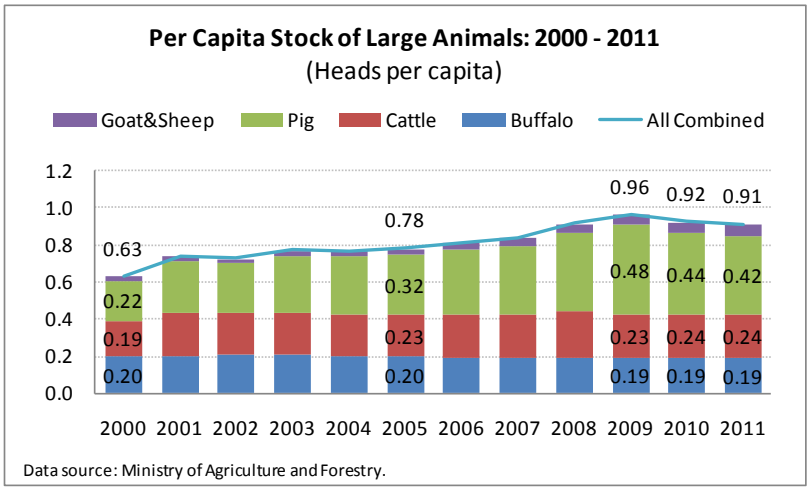
Table 3

Lao PDR's Technical Productivity for Selected Crops
(National Average; Ton per Hectare)

	1990	2000	2005	2008	2011
Rice (all)*	2.37	2.87	3.38	3.42	3.41
Season Rice	2.76	3.23	3.75	3.82	4.29
Irrigated Rice	2.90	3.94	4.14	4.40	4.67
Upland Rice	1.49	1.70	2.02	1.73	1.73
Maize	1.98	2.33	4.02	4.12	5.71
Sugar	24.26	21.40	35.79	17.43	27.38
Starch	8.28	5.05	9.27	14.64	17.07

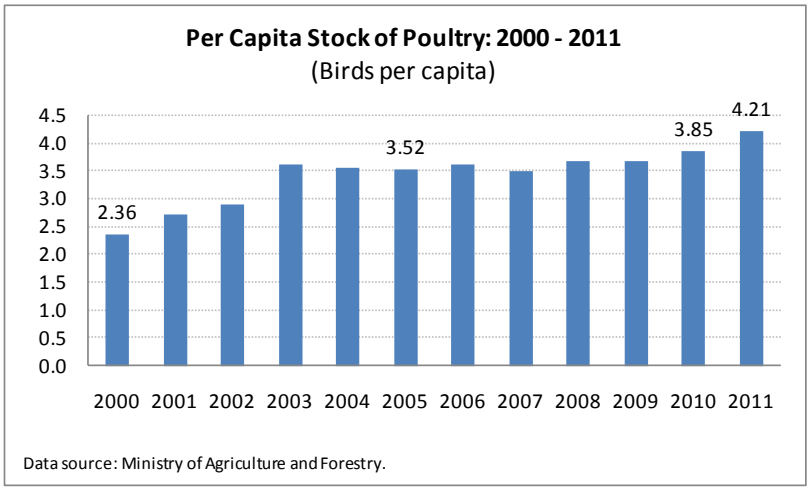
* Rice (all) is an average of Season, Irrigated and Upland Rice. Source: Ministry of Agriculture and Forestry.

Figure 19



[11] http://faostat.fao.org/site/569/DesktopDefault.aspx?PageID=569#ancor (accessed May 29, 2013).

Figure 20



Rapid growth in investment, especially by or associated with FDI, has created a growing demand and competition for land. As a result, conflicts between investors and local village land occupiers have inevitably became a national issue of concern. Investment in projects associated with the use of large land area such hydroelectric power, mining, forestry, agricultural plantation, real estate and others falling in special zones commonly took place on or overlapped lands either occupied or being used by villagers to grow crops or harvest non-timber forest products (NTFPs) for their sustenance. In most cases, if not all, villagers were compensated for relocation. A number of projects have done satisfactory work involving assisting the villagers in their relocation and new livelihoods. In many projects, if not most, although some villagers were satisfied with the compensation, there have been many complaints, which were loudly echoed at the National Assembly, about less than "fair" compensation and not having received the compensation as promised. Thus, many investment projects have infringed villagers' rights to livelihoods and, as a result, some affected villagers may have been pushed towards greater hardship. This is a result of just from rising competition for land. Table 4 summarizes land concessions for investment between 2000 and 2009.

Table 4

Total area allocated for investment, 2000-2009 (in 1,000 hectares)	
Mining	548.8
Forestry	306.2
Agriculture	140.0
Tourism	75.2
Manufacturing/processing	22.9
Others	6.5
Total	1,099.5

Note: Excludes logging concessions, contract farming, hydropower projects, and mining exploration. Sources: Ministry of Natural Resources and Environment Natural Resource; Environment Information Center. Borrowed from Frielink and Leuangkhamsing, in ADB (2013).

Some projects, particularly those either involving the use of chemical, such as mining projects, or involving making a permanent physical change to the nature, such as hydropower dams, have caused environmental deterioration in villages. In the case of chemical use, the damage could be life threatening through direct contact or through the food chain as harmful chemicals get in the stream or water supply source or land (farm or forest). The environmental impact of hydropower dam has a number of aspects, including those that threaten human health and food security. However, the potential human health effect is considerably lower than for the case of mining. In either case, villagers' rights to livelihoods and security could be violated and, as a result, pushed the affected villagers towards greater hardship and deeper in poverty.

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