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Trade Liberalization, Economic Reform and Poverty Reduction in Lao PDR

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ABSTRACT *Since 1986 Lao PDR has greatly reduced the barriers to international trade and the government's direct controls over the economy. Aggregate growth during this reform period has been quite rapid. Although the benefits of growth have gone disproportionately to the non-poor and inequality has increased, poverty incidence is nevertheless estimated to have fallen from about 45% in 1992–93 to 30% in 2002–03. After surveying these developments, this paper discusses the policies that the government is currently proposing as ways to ensure that the benefits of further opening of the economy are more equally shared.*

KEY WORDS: Laos, poverty, trade liberalization

Introduction

Lao People's Democratic Republic began its transition from a centrally planned economy to a market-oriented one in 1986, when the government adopted the 'New Economic Mechanism' (NEM). Between 1986 and 1989 most controls on retail prices and agricultural procurement prices were relaxed, state-owned enterprises (SOEs) were given autonomy in making production and investment decisions and the autonomy of provincial governments was increased.

The reform process, which is discussed in more detail in the next section, continued in the 1990s. A privatization decree was passed in 1990 and formed the basis of a large-scale program of privatization of formerly state-owned enterprises in the period 1991–94. Another major reform was the partial liberalization of international trade. At first, the loss of central government control over SOEs combined with reduced revenue from trade taxes and increased government spending resulted in a large fiscal deficit that was financed by borrowing from the central bank, the Bank of Lao PDR (BOL). As a result, inflation reached 60% in 1989 (ADB, 1996) and the Lao kip (LAK) depreciated rapidly in the parallel market. However, the official exchange rate was then allowed to float and most of the gap between the official and parallel market rates was eliminated.

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Table 1. Per cent of population below the poverty line, 1992–93 and 1997–98

	1992–93			1997–98		
	Urban	Rural	Total	Urban	Rural	Total
Vientiane	22.5	30.1	24.4	16.7	4.5	12.2
Northern	48.9	60.4	58.4	43.3	53.5	52.5
Central	37.4	39.9	29.5	27.7	35.9	34.9
Southern	27.6	49.6	38.4	35.8	38.7	38.4
Lao PDR	33.1	48.7	45.0	26.9	41.0	38.6

Source: ADB (2001: 26).

GDP growth during the reform period has been rapid. It averaged 7% per year between 1992 and 1997, slowed to 4.5% between 1996/97 and 1997/98 because of the financial crisis in Thailand, which is the most important single market for Lao exports, and then recovered to just under the 7% rate that had been achieved in the early 1990s (IMF-IDA, 2001, Table 1).

Poverty incidence fell, on average, between 1992/93 and 1997/98 in both urban and rural areas; however the reductions were far from uniform and poverty incidence actually rose in some regions, as Table 1 shows. Two studies of the changes in poverty over this period are surveyed in the third section of this paper. They are Kakwani *et al.* (2002) and the Interim Poverty Reduction Strategy Paper (Government of Lao PDR, 2001), henceforth I-PRSP. Both studies use the household expenditure survey data obtained by the Lao Expenditure and Consumption Survey (LECS) for 1992–93 and 1997–98 to show that the rapid growth of the last decade has substantially benefited most poor people, despite an increase in inequality.

Although both studies use the same basic data, their findings are sensitive to the exact construction of the poverty lines and the estimates of how prices vary across regions and over time. As a result, they produce substantially different estimates for

Table 2. Alternative estimates of poverty and inequality, 1992–93 to 1997–98

	Headcount poverty rate %	Poverty gap %	Severity of poverty %	Gini coefficient %
1992–93				
I-PRSP	45.0			28.6
Kakwani <i>et al.</i> (2002)	46.0	11.2	3.9	30.5
1997–98				
I-PRSP	38.6			35.7
Kakwani <i>et al.</i> (2002)	39.1	10.3	3.9	34.9
Growth (% p.a.) 1992–93 to 1997–98				
I-PRSP	–3.1			4.4
Kakwani <i>et al.</i> (2002)	–3.3	–1.6	0.0	2.7

Source: Government of Lao PDR (2001), Kakwani *et al.* (2002).

some variables. Their main findings are summarized in Table 2. Despite the differences between them, they both show a substantial rise in the Gini coefficient and a substantial fall in the headcount ratio; Kakwani *et al.* (2002) shows a fall in the poverty gap, but no change in the severity of poverty.¹

Preliminary results from the most recent LECS, which covered the period 2002–03, indicate that the headcount ratio has fallen to 30%. If correct, this implies that poverty incidence fell by about one third in a decade, from 45% in 1992–93 to 30% in 2002–03.

The government's National Growth and Poverty Eradication Strategy (NGPES),² which is the subject of the final section of this paper, aims to ensure that the poor share more fully in future growth than they have in the past. This is to be done by promoting education, health, agriculture and transport and communications. Spending on basic education and health will benefit the poor directly. Since most poor people work in subsistence agriculture, they will also benefit directly from rural electrification, improved irrigation and better agricultural extension services. Spending on transport and communications will help to integrate the poorest provinces more closely with the more prosperous ones.

Reductions in Barriers to International Trade

Lao PDR began its transition with highly dispersed rates of import duties, substantial export taxes and all-encompassing licensing of both exports and imports. Before 1995, the highest rates of duty facing those without exemptions were 100%. However, the existence of very widespread exemptions from import duties meant that the ratio of duty collected to the value of imports was relatively low. In 1992, this ratio was only 8.2% (World Bank, 1994: 78).

Even after the reforms in 1987 and 1993, which reduced both the highest import duty rate and the number of separate import duty bands, there were still 12 different bands, with rates that ranged from 5% to 100% (World Bank, 1994: 75–76). In 1995, the maximum rate was reduced from 100% to 40% and the number of bands was reduced to six (5%, 10%, 15%, 20%, 30% and 40%). By 2003, tariffs were low and not very dispersed: the import-weighted average MFN tariff was only 10% and the standard deviation was only 9 percentage points.

Restrictive export licensing to protect domestic users (as opposed to licensing that is used for security, environmental, moral or religious reasons) has now been abolished and the elaborate system of import licensing has been simplified and relaxed. Domestic producers of cement, steel, wood products and some agricultural products continue to receive substantial protection in the form of non-tariff barriers. The regulatory framework for wide-ranging restrictive import licensing of other products has not been dismantled, but, at least for the time being, this framework is mainly used for registration and monitoring. Exchange controls still exist on current account transactions, as well as on capital account transactions. However, the BOL normally adjusts the exchange rate so as to keep the premium of the price of foreign exchange

in the parallel market over its price at the official rate below 1%. The main reason for maintaining import licensing and exchange controls appears to be that they are precautionary measures that could be given teeth if there were a large unexpected reduction in the availability of foreign exchange.

In 2001/02, export tax revenue was 1.6% of the value of the f.o.b. value of exports and the revenue from import duties was 4.4% of the c.i.f. value of imports. The fact that the value of import duties collected, as a proportion of the value of imports, was only about half the import-weighted average duty rate is consistent with the existence of:

- exemptions on imports of raw materials for the manufacture of exports,
- exemptions for imports by government and donor-funded projects,
- concessionary duty rates of only 1% on imports of plant, equipment and raw materials by approved domestic and foreign investors.

Although trade taxes are now low, high barriers to international trade still exist in the form of geography, red tape and poor infrastructure. Trade could also be facilitated by the improvement of the financial sector, by the removal of all exchange controls on current account, by the growth of foreign (and domestic) investment, by improvements in the legal system and by enhancing the security of private domestic and foreign investors.

Poverty Alleviation in Lao PDR

There are two dimensions to the problem of poverty in Lao PDR that make it even more serious than in most developing countries. First, it is a very poor country: Kakwani *et al.* (2002) estimate that relative to a poverty line of \$1.50 per person per day at 1993 purchasing power parity dollars, poverty incidence in Lao PDR was nearly half as much again as in Indonesia or the Philippines, and three times as high as in Thailand. Second, Lao PDR contains many ethnic minorities that are located in the remote regions and are cut off from economic opportunities in the towns both by language and cultural barriers and by poor transport and communications. The remote northern part of the country, in which the proportion of the population in rural areas is highest, is much poorer, on average, than the relatively more urbanized central provinces (see Table 1). Although poverty incidence is generally higher in rural areas than in urban areas, it is higher in the urban areas in the north than in rural areas in general. Vientiane municipality has the lowest poverty incidence and is also the region in which poverty fell most rapidly between 1992–93 and 1997–98.

Openness, Economic Reform and Growth

Many econometric studies using cross-country data from the period 1960–2000 support the proposition that opening an economy to international trade helps to raise the rate of growth of GDP.³ It may be that the increase in the growth rate due to

a once-over sustained increase in openness does not last for ever, but, according to these studies, it does appear to last for at least several decades.

In opposition to the majority view, Rodriguez & Rodrik (1999) argue that 'there is little evidence that open trade policies—in the sense of lower tariffs and non-tariff barriers to trade—are significantly associated with economic growth.' They justify this skepticism on the ground that some of the measures of openness used in these studies depend on factors other than direct barriers to trade. For example, the Sachs–Warner index depends on factors such as whether the economy is centrally planned and whether major exports are controlled by a state monopoly.

The fact that trade liberalization is often associated with other reforms that may speed up growth – such as the relaxation of price controls, exchange controls, investment licensing and other direct government interventions in the economy – does imply that the impact on growth of reductions in trade barriers alone would be overestimated by the studies that do not control for these other variables. While it would be interesting to know exactly which elements in reform packages are the most important, it is only of secondary importance to a country undertaking a broad program of reform to know whether the benefits come mainly from one part or mainly from another. Besides, basic economic principles suggest that each part enhances each other part: reducing tariffs is unlikely to have much impact on growth, or anything else, if all trade is directly controlled by the state; opportunities for profitable international trade cannot be readily developed if investment is controlled by restrictive licensing arrangements; investment opportunities will be severely limited if investors cannot export their output and import whatever inputs they may need, and no market-based economy can function efficiently without an efficient financial sector and a secure legal framework.

The channels by which trade liberalization, and the other reforms often associated with it, may affect growth can be classified in terms of the equation, used in studies of the sources of growth, that expresses the growth of GDP per worker as the sum of:

- (1) The growth of total factor productivity (TFP).
- (2) The growth of physical capital per person, multiplied by the share of capital.
- (3) The growth of human capital per person, multiplied by the share of labor.

Coe *et al.* (1997) found empirical support for the theory that trade links foster the transmission of technology and can thus contribute to the growth of TFP (channel (1)).

There is some theoretical and empirical support for the view that tariffs may attract foreign direct investment (FDI) into protected industries supplying the domestic market (Caves, 1996: 27–36); however, Balasubramanyam & Salisu (1991) found empirical support for the hypothesis of Bhagwati (1978) that, over the long haul, a trade neutral regime is likely to attract more FDI than one that taxes trade because in the latter case demand is at least partially limited by the size of the domestic market (channel (2)). Many surveys have found that non-tax factors, which include the simplification

Table 3. Role of trade and other taxes in government revenue

	1992/1993	2002/2003
Tax revenue/GDP (%)	9.1	9.1
Tax revenue/Total government revenue (%)	71.4	82.2
Turnover tax/Tax revenue (%)	16.6	24.2
Excise tax/Tax revenue (%)	5.1	15.2
Profit tax/Tax revenue (%)	10.0	11.5
Income tax/Tax revenue (%)	5.6	7.3
Import duty/Tax revenue (%)	20.2	16.4
Export tax/Tax revenue (%)	5.7	2.4
Trade taxes/Tax revenue (%)	25.9	18.8
Turnover, excise, profit, income and trade taxes/Tax revenue (%)	63.2	77.1
Import duty/GDP	1.8	1.5
Trade taxes/GDP	2.4	1.7

Source: IMF (1994, 2004).

of bureaucratic controls and the minimization of red tape, are important in attracting FDI (Caves, 1996: 205). These factors are probably also important determinants of domestic savings and influence whether these savings are invested locally or abroad.

Investment in human capital (channel (3)) is often provided by the government and depends in part on the buoyancy of total government revenue. While reductions in tariff rates normally reduce tariff revenue, reductions in non-tariff barriers raise it. Table 3 shows that between 1992/93 and 2002/03 the government's revenue from taxes on trade fell from 2.4% of GDP to 1.7%. Over this same period, the revenue from trade taxes fell from 25.9% of total tax revenue to 18.8%.

However, the net effect of trade liberalization on total tax revenue is complicated by the fact that tariffs are equivalent to taxes on consumption matched by subsidies to production; if trade liberalization is thought of as the removal of the production subsidies then its overall effect is to raise tax revenue. In practice, trade liberalization is often accompanied by the introduction of a value added tax, but at a rate below the pre-reform average tariff rate. Lao PDR plans to introduce a value added tax, but has not yet done so. In the meantime, revenue from domestic indirect taxes has risen relative to GDP and total tax revenue is the same proportion of GDP as it was in 1992/93. Since GDP grew rapidly in real terms over the decade following 1992/93, so too did the government's real tax revenue.

Openness, Economic Reform and Poverty Alleviation

The main channel by which the poor benefit from trade liberalization and other reforms designed to facilitate the operation of markets is via faster growth. Only if growth was associated with a substantial rise in inequality would the poor actually be made worse off by growth. In fact, there are very few examples of this in practice and Fields

(1980, 1988) showed that there is no evidence of a systematic relationship between growth and the distribution of income. In some cases, rapid growth is associated with rising inequality, but in others it is associated with falling inequality. This is also true of countries with below average growth rates. Dollar & Kraay (2000) confirmed that, on average, the rate of growth of the incomes of the poorest 20% of the population is not systematically faster or slower than the growth of GDP.

The channels by which growth benefits the poor are capital accumulation, TFP growth and increased real government revenue. Capital accumulation and TFP growth both raise the demand for unskilled labor; buoyant government revenue permits increased spending, some of which – for example, health care, primary education and rural roads – is of direct benefit to the poor.

The effects of trade liberalization and associated reforms on the living standards of the poor depend on whether, on average, the prices of the things that they buy rise or fall relative to the prices of the things that they sell. In developing countries, the poor supply unskilled labor and the growth effects just described benefit the poor primarily by raising the demand for such labor. There can also be effects that are ‘static’ in the sense that they do not depend on technical progress, or on the accumulation of human or physical capital and that operate directly from the effects of trade barriers on relative prices. Table 4 shows that the average tariffs on manufactures are much higher

Table 4. Import duties immediately after the reforms of 1993 and at end 2000

	Post-1993 Reforms	End 2000
Agriculture:		
Seeds	20%	5%
Fertilizer	5%	5%
Other	5%	5%–40%
Fisheries	5%–10%	n.a.
Stock farming		
Feed	5%	5%
Other	5%–30%	5%–30%
Manufacturing		
Raw materials	5%–10%	5%–10%
Packaging	10%–20%	10%–20%
Energy	5%–15%	5%–20%
Machinery and equipment	5%–20%	5%–20%
Trucks	5%–30%	5%–30%
Protected local manufactures	30%–80%	30%–40%
Consumer luxury imports		
Food	20%–80%	10%–30%
Non-food	10%–100%	10%–40%

Source: Rates at end-2000: IMF (2001: 15). Rates post-1993: World Bank (1994: 76).

than those on agriculture. Trade reforms that move the tariff structure towards free trade will therefore favor factors that are used intensively in agriculture, relative to those that are used intensively in manufacturing. Since total poverty is dominated by rural poverty, and since off-farm employment, at about 160,000 people in 1998/99, is relatively small compared to the employment of just under 2 million people in subsistence agriculture,⁴ it is likely that reforms that reduce the anti-agricultural bias of tariffs will help the poor.

Progress on Poverty Alleviation in Lao PDR, as Measured by Household Expenditure

In conformity with the evidence cited in the preceding subsection, increased openness in Lao PDR has been associated with increased growth, and poverty has fallen according to most measures. However the poor have benefited from growth by less, in proportionate terms, than the rest of the society. This subsection reviews poverty measures based on private expenditure per person; the next subsection reviews progress on indicators of social welfare that are mainly dependent on government expenditure, rather than private expenditure.

Evidence on the expenditures of poor people in Lao PDR comes from three household expenditure surveys (Lao Expenditure and Consumption Survey, LECS) that were conducted in 1992–93, 1997–98 and 2002–03. Each survey covers a 12 month period from March of the first year to February of the second; however, as of June 2003, only preliminary results for the first 9 months of the most recent survey were available.

Poverty is measured using data on nominal expenditure deflated by the price of a fixed bundle of goods. The food component of expenditure at the poverty line used by Kakwani *et al.* (2002) is based on an assumed intake of 2100 kilocalories per person per day. That in the I-PRSP assumed an average intake of 1983 kilocalories per person per day. The non-food component in each study is estimated from the observed non-food expenditures of people whose food consumption is near the assumed poverty line intake. Spatial price disparities are allowed for by calculating the cost of the fixed bundle of goods in seven regions: the Municipality of Vientiane and the urban and rural regions in the north, centre and south. All the members of a household living in any given region are classified as poor if the average per capita expenditure of family members is less than the poverty line for the area in which they live. In 1997–98, Kakwani *et al.* (2002) estimated the average poverty line for Lao PDR to be LAK 20,597 per person per month in urban areas and LAK 19,718 per person per month in rural areas. At the average market exchange rate, which greatly understates the purchasing power of the kip, the poverty line is only \$0.41 per day in urban areas and only \$0.39 per day in rural areas.

Kakwani *et al.* (2002) state that: ‘growth has *not* been good for the poor in Lao PDR’ (p. 13). This assertion appears to be contradicted by their finding that two of their reported poverty measures fell between 1992–93 and 1997–98, while the third

was unchanged. In fact, their assertion that growth was not good for the poor is based on their finding that the real private consumption of those in the poorest quintile fell at an average annual rate of 0.3% over the period. This finding can be reconciled with reductions in the headcount and poverty gap measures, and with no change in the severity of poverty, since Kakwani *et al.* report that the real spending of those in the *second* poorest quintile increased at an average annual rate of 1.0% over the period and that the poor comprised not only the poorest quintile, but most of the second poorest also – the poor comprised 46% of the population in 1992–93 and 39% of the population in 1997–98.

A more precise statement of the findings of Kakwani *et al.* (2002) is that ‘growth has been associated with a fall in the per capita real private spending of the *very* poor, but with a substantial increase in that of those who were only just below the poverty line.’ There are three grounds for thinking that even this statement is too pessimistic. First, the finding of Kakwani *et al.* that the average per capita real private consumption of those in the poorest quintile fell between 1992–93 and 1997–98 is at odds with the finding of I-PRSP (Table 6, p.10) that it rose over this period at an average rate of 2.3% per year. The estimates of Kakwani *et al.* (2002) may well be better than those of I-PRSP, but further research on the differences between the two is needed to make sure that this is so. Second, and much more important, the poverty estimates of both I-PRSP and Kakwani *et al.* (2002) are derived from data on private spending that does not take account of government spending; however, as discussed in the next sub-section, all available social indicators indicate that government spending on health and education have substantially improved the well-being of the poor. Third, the 1997–98 LECS coincided with the period when the effects on the Lao economy of the economic crisis in Thailand, which is by far Lao PDR’s most important trading partner, were at their most severe.

Some evidence on why the real private consumption of the very poor may have fallen between 1992–93 and 1997–98 is provided in Table 5, which collects together provincial data from Kakwani *et al.* (2002) on the changes in per capita real private consumption and changes in the severity of poverty. It shows a strong negative correlation between these two variables across provinces. The growth of per capita real private consumption and the decline in the severity of poverty were both most rapid in Vientiane Municipality. At the other extreme, there were only three provinces in which per capita real private consumption fell between 1992–93 and 1997–98 and these were also the three provinces in which the severity of poverty grew fastest – Oudomxay, Borikhamxay and Bokeo.

Oudomxay and Bokeo are in the mountainous extreme northwest of Lao PDR and are isolated from the rest of the economy. This presumably is part of the explanation for the sharp difference between their experience and that of most of the rest of Lao PDR in the period 1992–93 to 1997–98. Borikhamxay is centrally located, just to the south of Vientiane, and had the highest level of per capita real private consumption and the lowest level of poverty of any province in 1992–93. One partial reason for

Table 5. Per capita income and severity of poverty by province, 1992–93 to 1997–98

	Per capita consumption*			Severity of poverty**		
	1992–93	1997–98	Growth (% p.a.)	1992–93	1997–98	Growth (% p.a.)
Vientiane Municip.	29,765	44,175	7.9	2.1	0.8	–18.3
Phongsaly	17,611	21,447	3.9	4.7	7.1	8.3
Luangnamtha	22,934	23,893	0.8	3.5	5.4	9.1
Oudomxay	24,373	18,678	–5.3	2.8	12.1	29.5
Bokeo	26,313	26,203	–0.1	1.7	3.5	14.7
Luangphrabang	20,914	26,835	5.0	5.6	3.6	–8.8
Huaphanh	17,309	18,202	1.0	11.2	10.1	–2.1
Xayaboury	30,008	38,301	4.9	1.5	0.8	–12.7
Xiengkhuang	20,449	25,533	4.4	6.9	4.6	–7.8
Vientiane Province	31,108	33,729	1.6	2.0	1.8	–1.9
Borikhamxay	38,470	30,412	–4.7	0.5	2.8	35.9
Khammuane	22,974	28,349	4.2	4.3	3.9	–2.3
Savannakhet	24,501	25,569	0.9	3.4	3.2	–1.2
Saravane	24,667	26,252	1.2	2.5	3.6	7.2
Sekong	18,664	24,089	5.1	10.4	6.5	–9.6
Champasak	28,138	29,069	0.7	3.8	3.3	–2.9
Attapeu	23,129	23,549	0.4	10.2	4.3	–17.3

Source: Kakwani *et al.* (2002).

*Per capita real consumption is measured in LAK per month, at the average prices in urban areas in the period March 1997 to February 1998.

**Severity of poverty is the P2 measure of Foster *et al.* (1984). See Note 1.

its failure to share in the growing prosperity of most of the rest of the country is the gradual enforcement of bans on illegal logging, which appears to have been an important source of its income.

These disaggregated regional results show that much of the reason for the failure of the very poor to share in the growth of aggregate private spending was that rapid growth at the national level was associated with falling per capita real private spending in a few regions, and in these regions the severity of poverty increased. In only three of the 17 regions identified in Table 5 – Phongsaly, Luangnamtha and Saravane – was positive growth of per capita real private consumption associated with increasing severity of poverty.

These results suggest that opening up the economy to increased international trade did increase per capita real private consumption for most people, and did raise the average per capita real private consumption of the poor. However, in proportionate terms, and considering only private expenditure, the poor gained less than the rest of the population, and the poorest quintile may have lost out in the five year period that ends at the time of the Asian economic crisis in 1996–97.

Improvements in Social Indicators

There have been across-the-board improvements in social indicators during the reform period. Among the most important improvements reported by the I-PRSP are the following. Between 1995 and 2000, life expectancy at birth increased from 51 years to 59 years, the mortality rate for children under 5 years fell from 170 to 107 per 1000 live births. The maternal mortality rate per 100,000 live births fell from 560 in 1995 to 530 in 2000. The proportion of the population with access to safe drinking water increased from 15% in 1995 to 50% in 2000 (Government of Lao PDR, 2003, p. 34). In October 2000, Lao PDR was declared to be free of polio and 95% of villages were covered by basic vaccinations under the government immunization program.

There are large differences among provinces in social indicators. For example, in Vientiane Municipality about 90% of both girls and boys between ages 6 and 14 are enrolled in primary schools, whereas in the northern region the corresponding enrolment rate for boys is between 45 and 50%, while that for girls is below 40% (SPC-NSC, 2000). Life expectancy at birth ranges from 57 years in the northern region to 63 years in Vientiane Municipality and the prevalence of malaria varies from 7 cases per thousand people in Vientiane to 82 per thousand in the southern provinces (Government of Lao PDR, 2003: 34).

The problems measured by the social indicators reported above are overwhelmingly problems of the poor, and education, health care, immunization, sanitation and access to safe drinking water are services provided by the government. The improvements in these social indicators therefore provide strong evidence that the goods publicly provided to the poor have increased greatly. Even if there were no evidence of higher private consumption by poor people, this would provide strong evidence that poverty has been significantly reduced during the 1990s, and particularly during the second half of the 1990s. This achievement is all the more impressive since it covers the period of the Asian crisis.

The National Growth and Poverty Eradication Strategy (NGPES)

The government has shown its intention to consolidate the process of opening the economy to international trade and investment by applying to join the World Trade Organization (WTO). Besides the liberalization of merchandise trade and investment, this will involve the opening up of service sectors to international competition and the introduction of laws to protect intellectual property rights, to modernize the customs service and to make the treatment of import and export standards and quarantine procedures compatible with WTO norms. Another major planned reform is the introduction of a value added tax.

To try to ensure that the benefits of these planned reforms flow through to the poorest groups, the government has set out a strategy of increased spending on health, education and sanitation and on policies aimed at directly helping the poor and at reducing the barriers that separate the most isolated provinces from the rest of the

country. These policies are described in Government of Lao PDR (2003). To target increased spending at the poorest groups, the NGPES used data from the household expenditure surveys to identify 47 very poor districts that will receive priority in the allocation of public investment.

The NGPES does not provide estimates of the costs of all its components. Rather it is intended as a framework for shaping future budget priorities. However, it does propose an initial allocation of LAK 40 billion (about \$4 million) per year to finance village level development projects selected by local community groups. Since this fund is only 1.6% of total public investment and only 0.2% of GDP, the bulk of the assistance to poor people is likely to come from increased public investment programs in four sectors that are the focus of the NGPES: education, health, transport and infrastructure and agriculture and forestry. Total public investment in health (LAK 245 billion or about \$25 million) and education (LAK 310 billion or about \$31 million) make up 10% and 12%, respectively, of total public investment spending, which in turn is about 10% of GDP. The NGPES does not explicitly identify the shares of public spending on transport, other infrastructure, agriculture and forestry that are specifically related to the NGPES.

The importance of agricultural development to poverty reduction is obvious: poverty incidence is higher in rural areas than in urban areas and, in 1999, 84% of all households were agricultural households. The main ways of promoting agricultural development that are proposed in the NGPES are public spending on extension services, improved road and river transport, rural electrification and irrigation.

Reducing the physical barriers separating people in remote areas from the urban centers in which growth is likely to be concentrated will make an important contribution to poverty alleviation. Some of the people presently in the remote areas will benefit from growth by migrating to urban areas, while those who do not migrate will benefit partly from remittances sent by family members who move to the towns and partly as a result of the increased opportunities for internal trade between the remote rural areas and the more urbanized areas.

As the costs of transport and communications are reduced, the inhabitants of remote areas will be able to buy goods from the towns more cheaply and receive higher prices for the agricultural and manufactured goods that they sell in exchange. In some cases – for example, tourism, mineral exploration and some agro-industrial projects – foreign and domestic direct investment will directly raise demand for labor in remote areas by creating jobs in these areas. Measures to improve financial networks in rural areas, including micro-finance, also offer opportunities for the expansion of small firms and farms and the increased job opportunities that this will bring.

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Notes

1. The headcount ratio is the proportion of the population below the poverty line; the poverty gap is the headcount ratio multiplied by the proportionate amount by which the mean real private consumption of poor people is below the poverty line. Equivalently, it is the ratio of the aggregate amount by which the real private consumption of all poor people is below the poverty line to the product of the population and the poverty line. The severity of poverty is the headcount ratio multiplied by the mean, for all poor people, of the squared proportionate shortfall of real private consumption below the poverty line. The headcount ratio, the poverty gap and the severity of poverty are, respectively, the P0, P1 and P2 indices of Foster *et al.* (1984).
2. Since 1999, the World Bank and IMF have based their assistance to low income countries on 'Poverty Reduction Strategy Papers' (PRSPs). The Lao government prepared an Interim PRSP for the World Bank and IMF in March 2001; see Government of Lao PDR (2001). As this document was revised its name was changed, first to National Poverty Eradication Program and then to NGPES. The final version is Government of Lao PDR (2003).
3. On the relationship between openness and growth see: Edwards (1993, 1998), Dollar (1992), World Bank (1993), Harrison (1996) and Sachs & Warner (1995).
4. Steering Committee for the Agricultural Census (2000), Tables 37 and 38.

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