

For SDC, Laos Program

Economic Importance of Laos' Livestock Trade

An Introduction

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The Importance of Livestock

For farm households, livestock is a source of nutrition, cash income and of agricultural inputs in the forms of power for land preparation and hauling, particularly for large animals such as buffaloes and oxen, and of fertilizer. Thus, livestock is a very important economic asset of farm population. This is especially true for Lao PDR (hereafter, Laos, for convenience), where a relatively large proportion of the population, approximately 77% of all households, still rely on livestock for food security, cash income and farm inputs.¹ About one third of agricultural annual output comes from livestock and fisheries. More than 95% of livestock in Laos was raised by smallholder farmers, and it is responsible for more than 50% of household's total cash incomes in many parts of the country's upland areas (Gansberghe, 2005). In many parts of the country's rural areas, where bank service outreach is either completely absent or irregular, livestock is a form of savings to provide a financial insurance.

Laos' recent economic growth has been dominated by the resource sector, particularly mining and hydroelectricity power, while manufacturing and the service sector have also been expanding at relatively high rates. The agricultural sector also made progresses, including livestock, but was growing at a relatively low rate, causing the agricultural sector to lag behind. Over the past five years (2008 – 2012), while industry and service respectively had an annual average growth rate of 15.1% and 7.8%, agriculture had a 3% growth rate.² As a result, agricultural output share in GDP has been steadily declining. In 2012, agricultural output share in GDP was 26.7% (NERI), declining from 32.2% in 2008, and from 48.5% in 2000. This relatively slow growth in the agricultural sector, with relatively high proportion of the population (77%) still dependent on smallholder system agricultural incomes, income disparity between the farm and nonfarm sectors has been widening.

With continued domestic and regional economic growth in the past decade, coupled with population growth, demand for meat consumption has also grown higher as households earned more income. Lao household expenditure surveys, which were conducted once every five years since 1992/93, revealed that household's spending shares (within food group) of meat; fish; and milk, butter and egg have all increased.³ Thus, livestock can play an important role in increasing income and the overall economic development of the farm population. Growing demand for meat consumption is reflected in rising livestock holding, meat production and livestock trade between Laos and its neighboring countries, particularly Vietnam, Thailand and China.

¹ Lao Census of Agriculture 2010/11 indicates that 48% of the country's total of 1.021 million households had poultry livestock, 30% had pig livestock, 29% had cattle livestock, 22% had buffalo livestock and 4% had goat livestock.

² In 2012, while the industry sector grew between 14% (ADB) and 14.4% (NERI—National Economic Research Institute.) and the service sector grew between 8% (ADB) and 8.1% (NERI), the overall agricultural sector grew between 2.5% (ADB) and 2.8% (NERI).

³ According to the *Lao Expenditure and Consumption Survey*, issues 1-4, between 1992/93 and 2007/08, household spending shares (within food group) of meat increased from 18.4% to 21.9%; of fish, from 10.7% to 13%; and of milk, butter & egg, from 1.1% to 1.4%.

Livestock Holding

In 2011, about 77% of all households in Laos were classified as farm households and virtually all of them had some livestock holding, either in the form of chicken, or cattle, or buffalo, or swine, or goat or a combination of these.⁴ There has been a significant decline of 30% in the number of households with buffalo holding between 1998 and 2010, dropping from 322,100 to 226,400, as farmers substituting tractors for buffaloes. Despite changes in the numbers and percentages of farm households with livestock holding in the past decade, as illustrated in Table 1, livestock remains an important economic asset for a large number of the population in Laos.

Table 1

	Households with Livestock Holding in Laos			
	HH No. (x 1,000)		% of Farm HHs	
	1998/99	2010/11	1998/99	2010/11
Total Households	798	1,021		
Farm Households	668	783		
Households with holding of:				
Buffalo	322	226	48	29
Cattle	208	297	31	38
Swine	328	306	49	39
Goat	26	43	4	6
Poultry	491	492	73	63

HH - Household. Data source: Lao Census of Agriculture 2010/11.

In 2011, there were 1,197 thousand live buffaloes, 1,538 thousand live cattle, 2,650 thousand live pigs, 433 thousand goats and 26,852 thousand live chicken in Laos, according to the Ministry of Agriculture and Forestry (MAF). Most buffalo and cattle livestock were in the central region, followed by the north and south. In 2011, 42% of buffalo livestock was in the central region, 30% in northern and 28% in southern region; and 50% of cattle livestock was in the central region, 29% in northern and 20% in southern region. While most swine and goat livestock were in the north, the south had the most chicken livestock. Starting from less than half the chicken livestock of the central and north, chicken livestock in the south grew rapidly and overtaking the central region in 2006 and north in 2011.

Over a period of eleven years between 2000 and 2011, livestock holding of large animals in Laos grew between 19% (buffalo) and 331% (goat) in head counts. Holding for chicken livestock grew 123%. Figure 1 shows trend for large animal holdings in absolute numbers and Figure 2 illustrates changes in per capita term, while Figure 3 shows trend of chicken holding in per capita term.

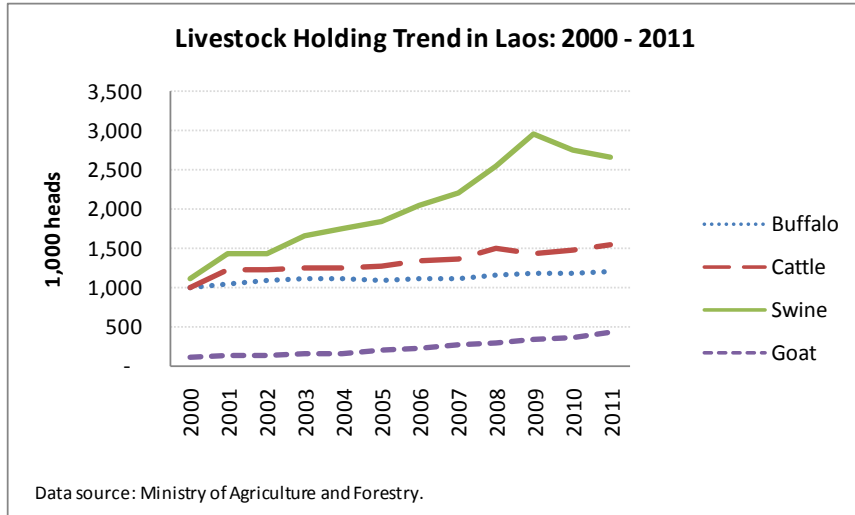
Despite the fact that, between 1998 and 2010, households with buffalo holding had declined from 48% to 29% of all farm households, the stock of live buffaloes had increased.⁵ While the

⁴ Lao Census of Agriculture 2010/11 indicates that, in 2011, there were a total of 1.021 million households in Laos, and 783,000 of them were farm households.

⁵ The MAF reported that there were 1.007 million buffalo in 2000 and 1.183 million in 2010. However, its "Lao Census of Agriculture 2010/11" suggests that the number of buffalo holding in 2010 had declined to 774,000 heads. This paper is more inclined to accept the former report, which is consistent with FAO's data with growing number of buffaloes slaughtered over this period, 150,900 in 2000 and 177,000 in 2010.

decline in percentage of farm households with buffalo holding has been the direct result of farmers substituting the more efficient tractors for buffaloes for land preparation and hauling, a small increase in the stock of live buffalo was a result of the commercialization of buffaloes for meat and hide was growing.

Figure 1



The decline in the combined per capita livestock of large animals after 2009 (Figure 2) was mainly contributed by the decline in the number of swine (see Figure 1), resulting from a surge in the number of swine slaughtered. In 2009, the number of swine slaughtered surged 21% to 2.3 million heads, from 1.9 million heads in the previous year, while the livestock holding was 2.95 million. The numbers of swine slaughtered in 2010 and 2011 remained high, at 2.2 million and 2.37 million heads, respectively, causing the livestock holding of swine to decline. Figure 3 illustrates growing per capita livestock holding of chicken between 2000 and 2011. Livestock holding of chicken grew rapidly in the early 2000s, then leveled off after 2003, but resurged in 2010 and 2011.

Figure 2

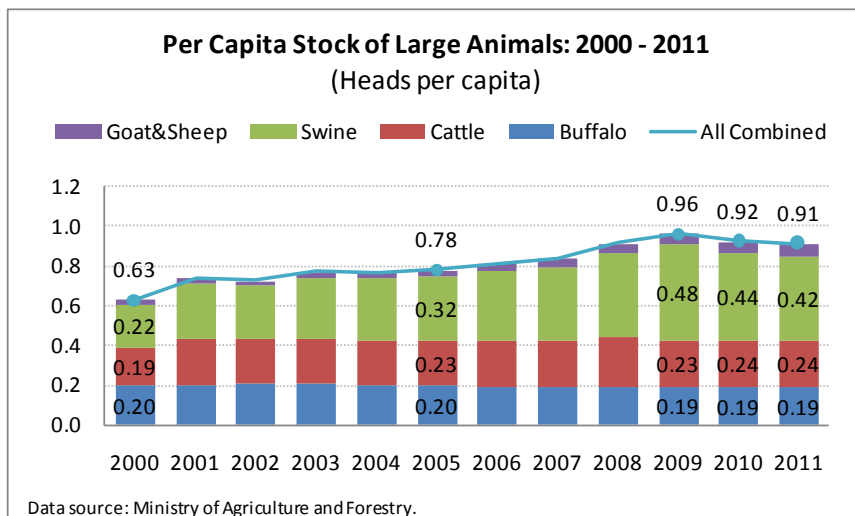
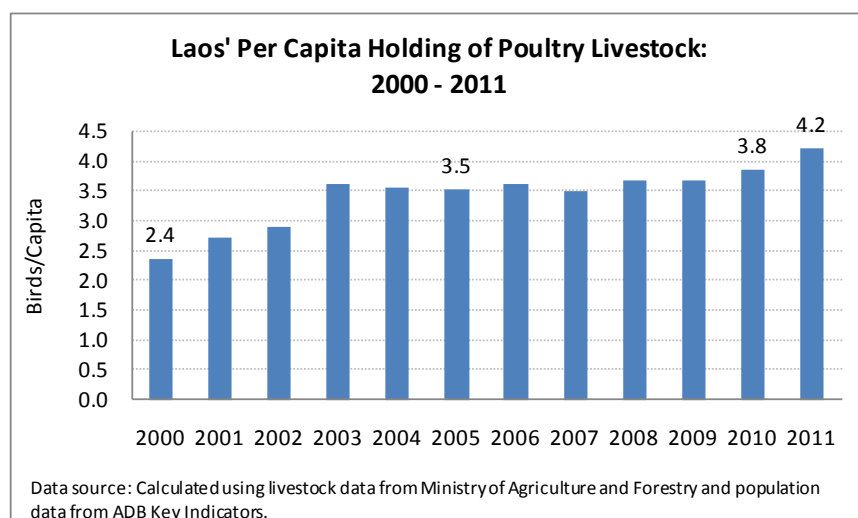


Figure 3



Livestock Production

Consistent with a growing livestock holding, livestock production was reported to have increased in 2012 (data not yet available). However, FAO data shows that Laos' meat production from cattle, swine, goat and chicken have increased in 2011 (the most current year data were available) while buffalo meat production was unchanged from previous year.

Over the past decade, between 2000 and 2011, Laos' annual production of buffalo meat grew 17% (from 16,600 to 19,470 tons); cattle meat, 62% (from 16,400 to 26,500 tons); swine meat, 131% (from 27,650 to 64,000 tons); goat meat, 287% (from 430 to 1666 tons); and chicken meat, 110% (from 9,700 to 20,400 tons).⁶ See Figure 4. Similarly, meat production in per capita term also increased for all types, except for buffalo, which declined slightly (6.5%), over this same period (Figure 5).

To understand Laos' livestock trade pattern, it is useful to examine Laos' per capita specific meat production in comparison with its major trading partners and neighboring countries. Per capita meat production data can be a useful indicator for trade flow direction, as a country with low per capita production tends to have domestic supply deficit and thus must import.

⁶ <http://faostat.fao.org/site/569/DesktopDefault.aspx?PageID=569#ancor> (accessed 11 June 2013).

Figure 4

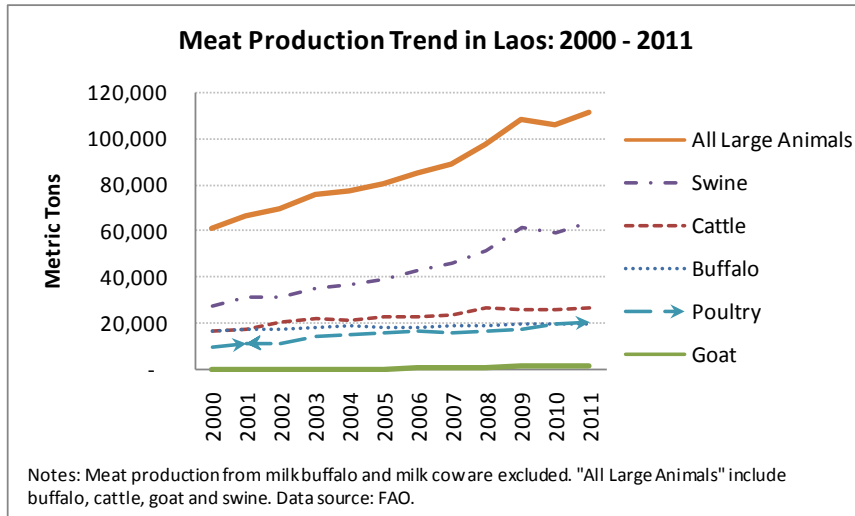
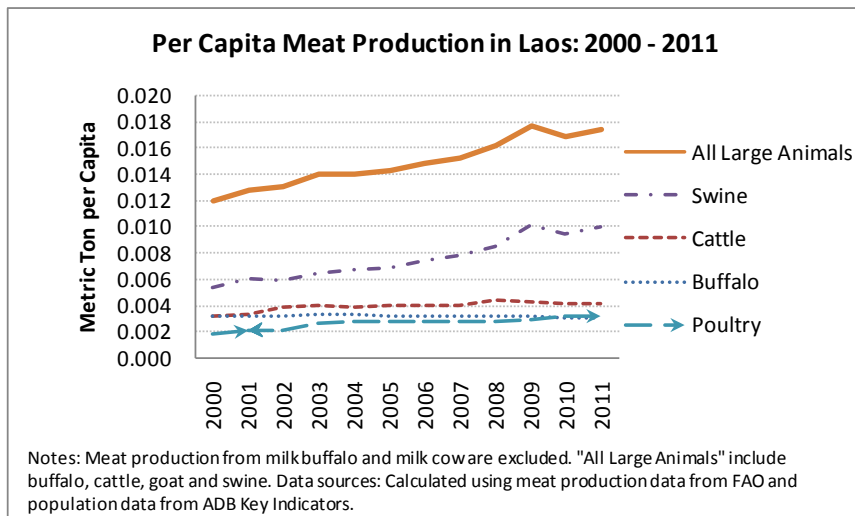


Figure 5



Among all of Laos' immediate neighbors, only China and Vietnam produced more meat of combined large animals (buffalo, cattle, goat, swine and sheep) in per capita term than Laos did since 2009 (Figure 6). Nonetheless, Laos has been the country with the highest per capita production of buffalo meat in comparison to all of the country's immediate neighbors (Figure 7). This is a reflection of the fact that buffaloes have been Lao farmers' traditional power for land clearing and hauling and that Laos is less mechanized in agriculture than other countries being compared. Although tractors have been replacing buffaloes for land clearing and hauling at a relatively rapid rate in farm communities, the total stock of buffaloes in Laos has not been shrinking as commercial demands for buffalo meat and hide have not declined as the demand for buffalo power in farms. For per capita cattle meat production, excluding meat of milk cow, Laos produced more than Myanmar, Thailand and Vietnam, but slightly less than China and Cambodia (Figure 8). Laos' per capita production of pork (swine meat, in Figure 9) although

nearly doubled between 2000 and 2011, the country produced less in per capita term than all of its major trading partners (Thailand, China and Vietnam). Over this same period, while Myanmar's per capita pork production has been growing relatively rapidly and nearly caught up with that of Laos, Cambodia's per capita pork output slid and going from above to under that of Laos since 2008.

Figure 6

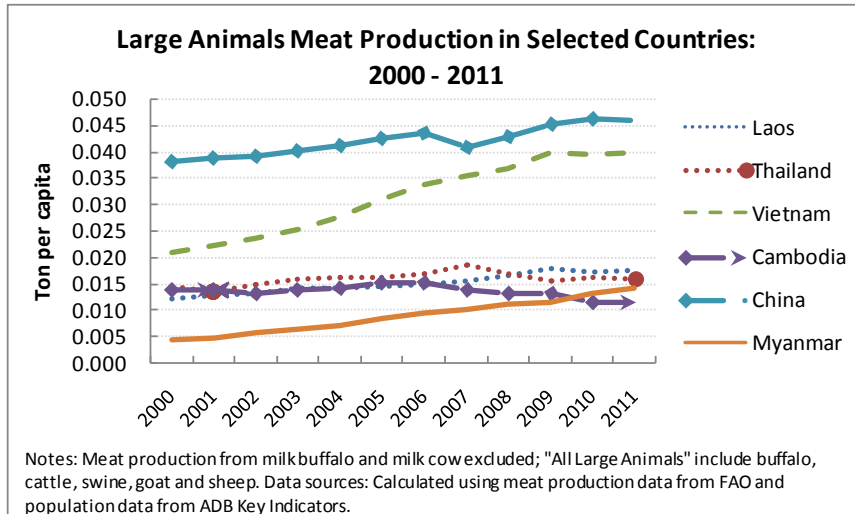


Figure 7

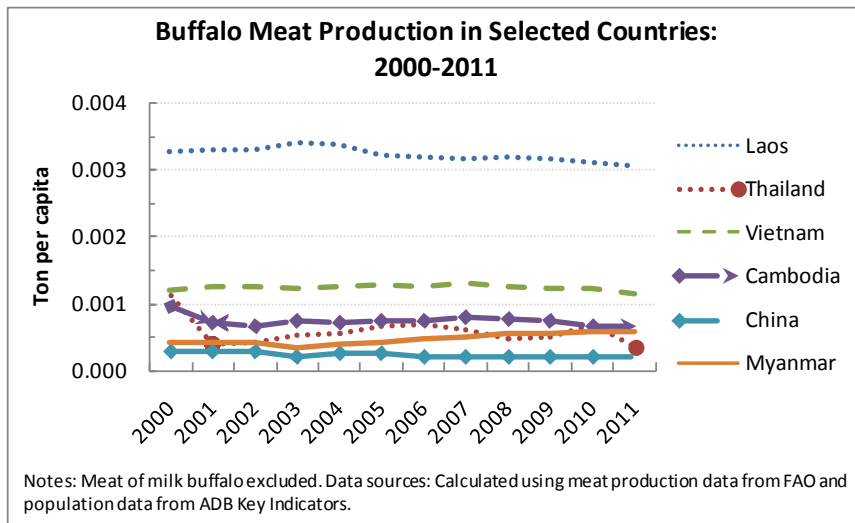


Figure 8

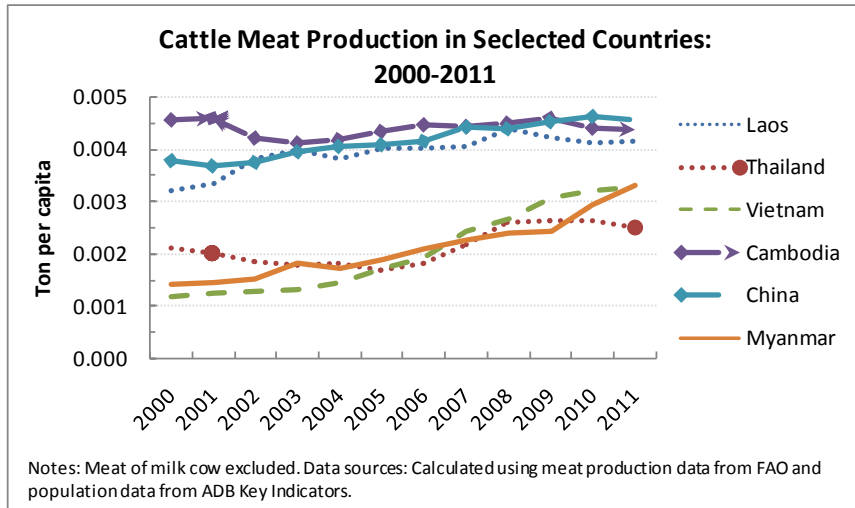
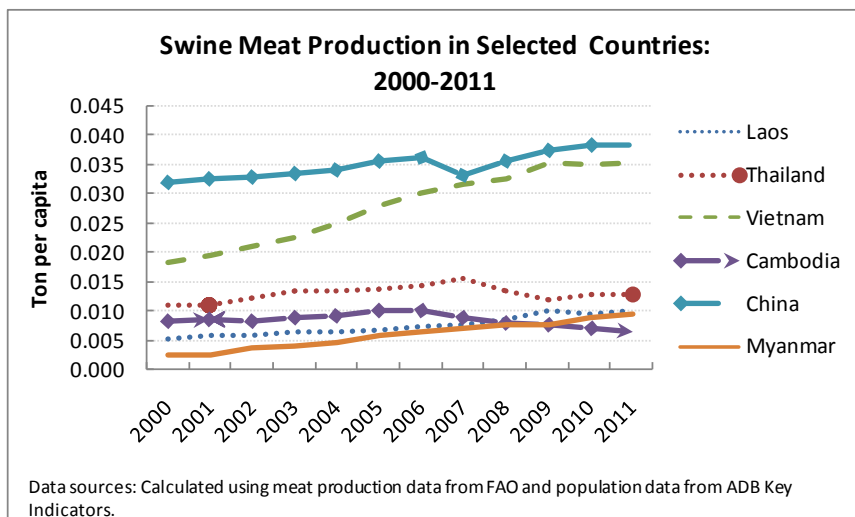


Figure 9



A growing popularity of goat meat and goat dairy products has led to a rising goat holding and goat meat production in Laos, although they remained small relative to those of buffalo, cattle and swine. In term of per capita goat meat output, only China and Myanmar were producing more than Laos (Figure 10). Figure 11 shows per capita chicken meat production. Cambodia, the only country with a slight decline in per capita chicken meat production (of 16%) over 2000-2011, has been the only country producing less than Laos, whose per capita output grew 68% over this period. While Thailand has continued to be the country with the highest per capita chicken meat producer throughout this eleven-year period, Myanmar's per capita output grew most rapidly (289%).

Figure 10

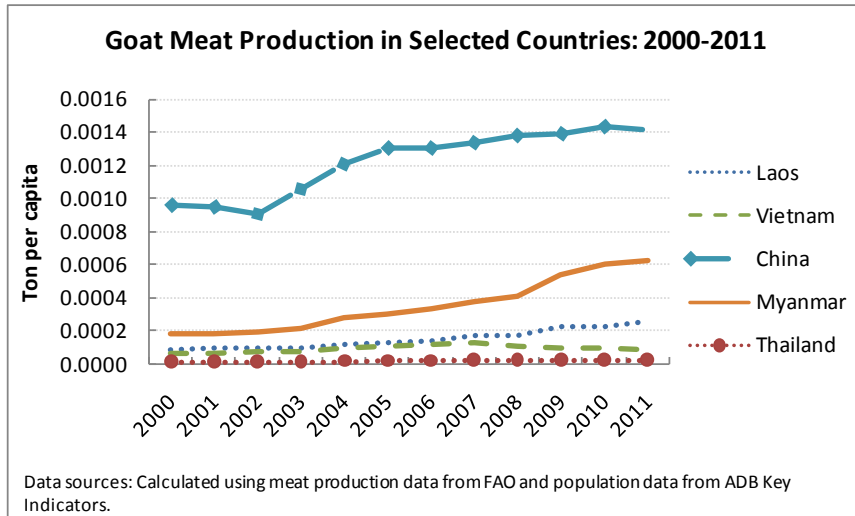
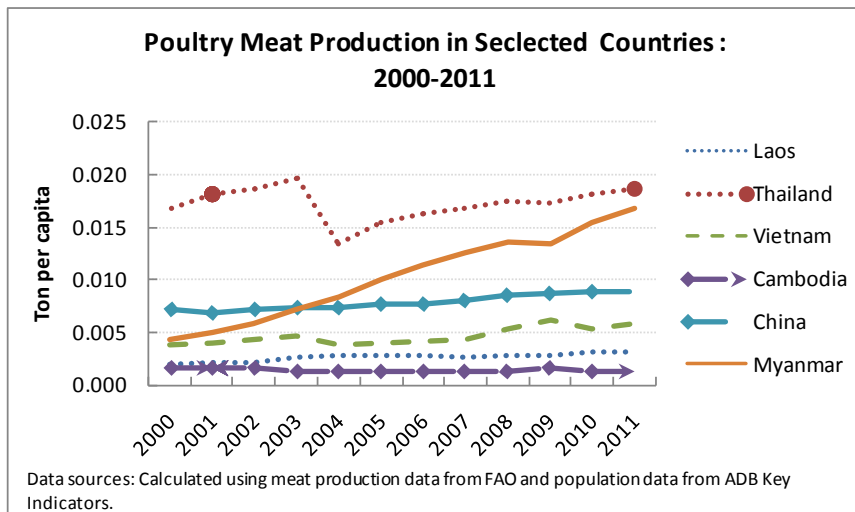


Figure 11



Livestock Trade

Laos imports very small quantities of live milk cows for dairy farm and quality beef mainly for fine dining restaurants. Exports from Laos have been in the form of live animals, mainly buffalo and cattle. Laos' major livestock export markets are the country's three top trading partners—Vietnam, Thailand and China—that are much larger and relatively wealthier neighbors. Table 2 summarizes Laos' livestock exports by types up to 2008/09 while Table 3 summarizes market destinations of these exports, also up to 2008/09. For 2009/10 and 2011/12, only aggregate data of export were available. The data suggests that, over 2006/07 and 2008/09, all goat export went to Vietnam (not shown in table); that most buffalo export went to China, followed by Vietnam and Thailand; and that most cattle export went to Vietnam, followed by China and

Thailand. A report by Theungphachan (undated) suggested that Laos exported approximately 100,000 heads of buffalo and cattle combined to Thailand alone.⁷ If this number of heads is converted into monetary value, it would be far exceeding the official figure of Laos' total livestock exports as shown in Table 3.⁸ The discrepancy is explained in the next paragraph. Laos also exports swine to these three countries, although all of the three countries produced more per capita swine meat than Laos (Figure 9).

Readers are advised to be very cautious when interpreting data in these tables, and all of the figures in the table should not be taken at the face value. They are much under-reported, and there are good reasons for this. The Ministry of Industry and Commerce (MoIC) reports trade data based on the customs' official data report. Most of livestock exports did not go through the cumbersome and time-consuming custom procedures to avoid official fees, taxes, and animal weight lost during the time required for custom clearance that could take days.

A case study of Xiengkhouang livestock marketing reveals that it could take up to seven days to get official documents for transporting livestock to a market outside of the province, which would cause 10 kg of weight lost per animal (NAFRI, NAFES and CIAT, undated). Traders normally went across farms and villages to purchase animals and then must obtain official documentations for transport across districts and provinces. The study also estimated that total official fees charged were "equivalent to 30% of the profit after fixed costs." In addition to official fees, there were also informal fees at a number of road-side check points that traders must pay. The study estimated that, in 2006, the province's trade of large animals to Vientiane was 68% informal and to Vietnam, 89%.

Although these official data (in tables 2 and 3) are far off the actual figures, they are useful as reference. Laos' exports of livestock have undoubtedly been growing in the past decade, as export data indicate and is strongly supported by a growing livestock holding and meat production data.

Table 2

Laos' Total Livestock Exports						
(USD1,000)						
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Buffalo	122.6	540.7	1,397.1	-	-	-
Cattle	58.2	197.5	706.0	-	-	-
Swine	11.7	77.2	19.4	-	-	-
Goat	100.6	23.1	151.4	-	-	-
Others	26.5	32.6	244.5	-	-	-
Total	319.6	871.2	2,518.3	1,121.3	1,373.9	1,631.0

Source: Ministry of Industry and Commerce.

⁷ Theungphachan is Head of Livestock and Fisheries Products Quality Assurance Unit, NAHC, DLF.

⁸ Based on official export data, average export prices of buffalo and cattle to Thailand in 2008/09 respectively were USD349.92 and USD 93.51 per head. For 2010/1, the overall average export price of buffalo and cattle (to all export markets) was USD160 per head.

Table 3

Laos' Total Livestock Export Destinations						
(USD1,000)						
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Thailand	112.3	191.0	23.7	-	-	-
Vietnam	164.2	648.1	1,162.5	-	-	-
China	43.1	32.2	1,332.1	-	-	-
Others	-	-	-	-	-	-
Total	319.6	871.2	2,518.3	1,121.3	1,373.9	1,631.0

Source: Ministry of Industry and Commerce.

Important issues associated with livestock trade include inefficient official procedural requirements for livestock movement, high and irregular official fees, informal fees at various road-side check points, and market information failures causing disincentive to smallholders to take better care of their animals. Information failures have led to a problem called "adverse selection" in marketing (Chadwick et al, 2008). That is, traders mixing livestock they purchased from smallholders across farms and regions, causing a mixture of qualities. Due to this problem, the price traders offered to farmers was based on mixed quality price, causing a disincentive to farmers to take better care of their livestock.

Livestock is a very important economic asset of farm population. It is a source of nutrition, cash income and of agricultural inputs in the forms of power (from buffaloes and oxen) for land preparation and hauling, and of fertilizer. Approximately 77% of all households in Laos, in 2011, was still relying on livestock for food security, cash income and farm inputs, and more than 95% of livestock in Laos was raised by smallholder farmers. Livestock is responsible for more than 50% of smallholder's household total cash incomes in many parts of the country's upland areas, as cited in Gansberghe (2005). Thus, with a continual rise in income and, consequently, demand for meat consumption domestically and in the region, mainly Laos' own immediate neighbors—China, Thailand and Vietnam, livestock development and trade promotion has a considerable potential in poverty alleviation.

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