



ແຜນງານພັດທະນາເຂດເນີນສູງພາກເໜືອ NORTHERN UPLANDS DEVELOPMENT PROGRAMME

SERVICE DELIVERY FOR LOCAL LIVELIHOODS

Sub-Sector Working Group on Uplands Development

LAO COFFEE INDUSTRY

COMMERCIALLY INTEGRATED COMMODITY DEVELOPMENT APPROACH

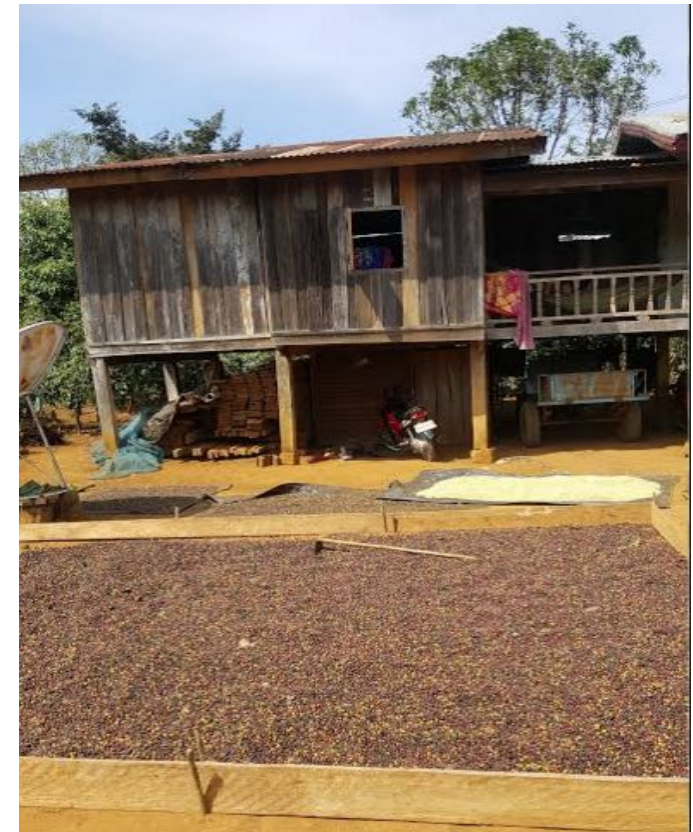
Undertaken by NUDP LOT C Value Chain Specialists

Presented by:
Geoffrey Quartermaine Bastin



FoodWorks Co. Ltd.

Don Chan Hotel, Vientiane, 17th March 2016





Lao Green Bean to Americano



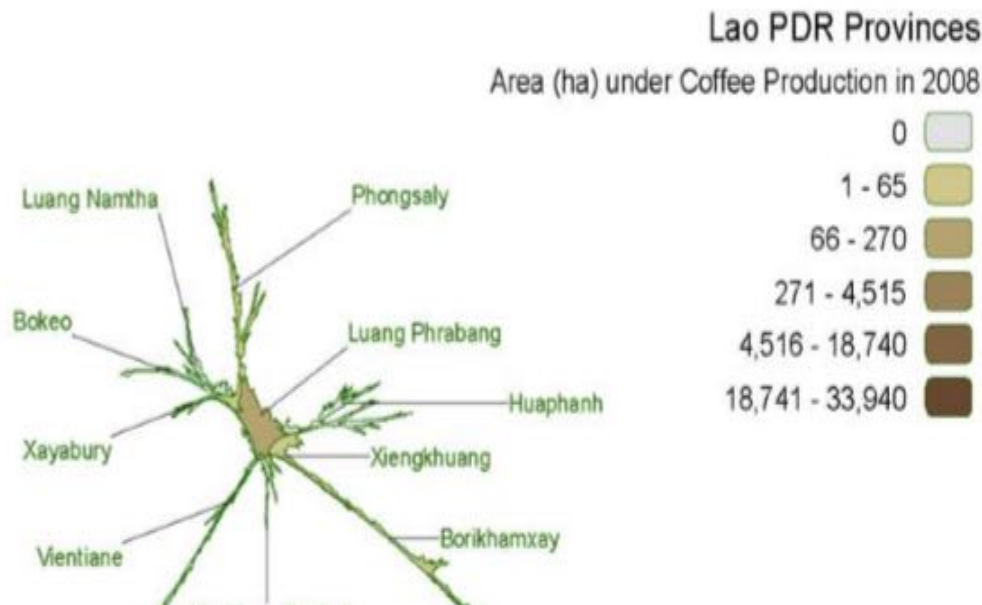
Today I am going to cover the full value chain for coffee.

The elements of this talk include:

- The position of **coffee in the Northern Uplands**
- Dynamics of the **world market and world market prices** – how Lao coffee fits in
- The **production and processing of Lao coffee** – especially in the South
- Details of the **value chain** - Why coffee in Starbucks or in the supermarket costs so much
- Factors affecting **marketing of Lao coffee**

Let's get started

Coffee in the Northern Uplands



Source: Matthew Toro, Dissertation

[Full choropleth of Laos coffee output](#)

Takeaway:

Considerable potential exists. What is required is an inter-provincial approach which is market and demand driven and integrated with commerce and investment coordinated with extension services.

The “choropleth” shows the data in proportion to the measurement of the coffee area and output being displayed. Coffee production is negligible outside Luang Prabang (and minimal compared to the South).

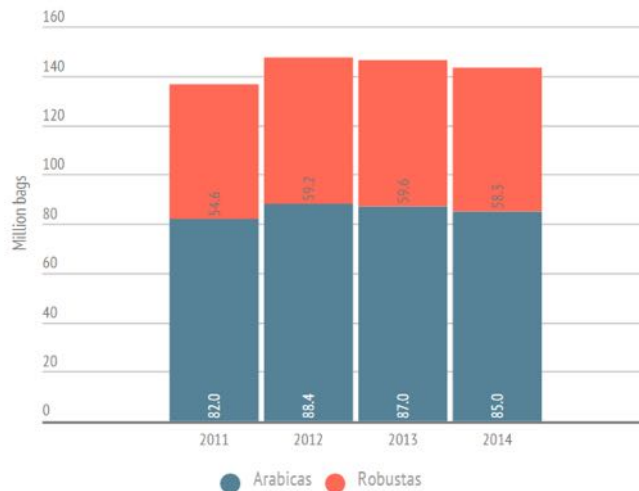
Key elements in the overall inability of coffee to take off in the NU are:

- Poor or minimal market demand
- Poor access (lack of infrastructure)
- Absence of processing capacity
- Absence of commercial presence of major buyers
- Failure to align commercial growing interest with local livelihood priorities or the environment

However, upland coffee (*quality Arabica*) is suited to the agronomic conditions and to environmental objectives.

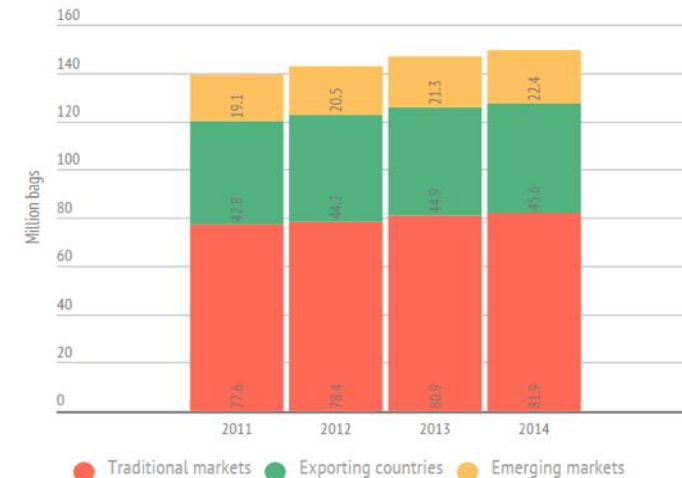
LAO COFFEE IN THE WORLD MARKET

World Production



(bags, 2011 to 2014)

World Consumption



Source: ICO

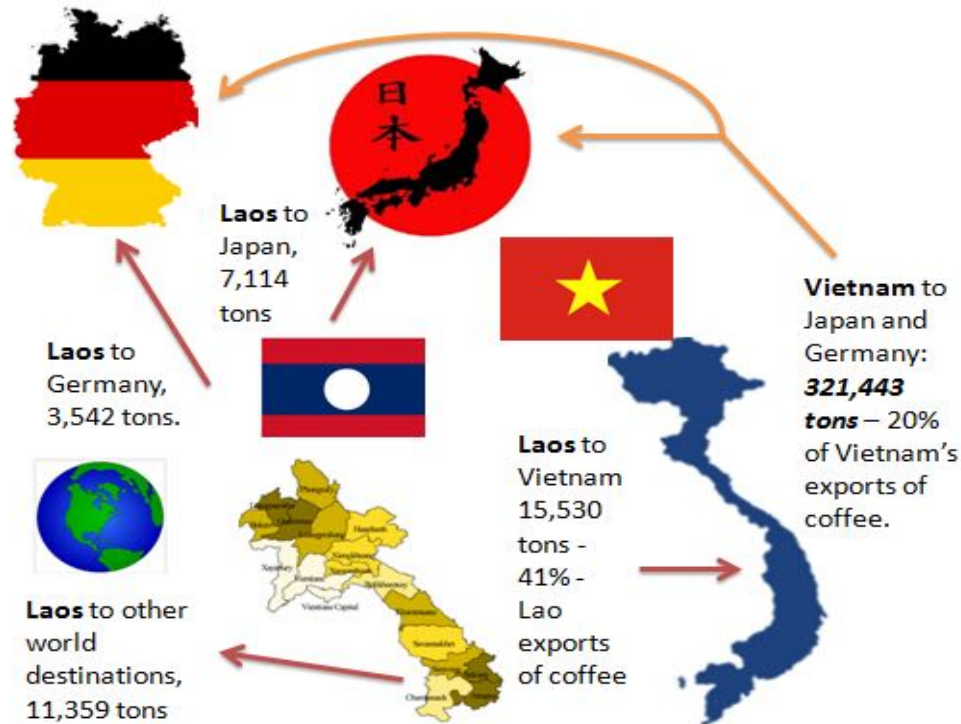
Total world production of both types of coffee is around 142 million bags (2014/15), of which Lao PDR produces perhaps 800,000 bags of which 626 thousand are (officially) exported.

World-wide people want more coffee, better quality coffee, coffee available in a convenient form (“single servings”). Asia consumption, especially in [China](#) is rising sharply and accounts for about 15% of demand.

TAKEAWAY: Laos is a very small supplier - “[price taker](#)” - in a large market with many supply origins and many consumers. The industry has no influence in the world market.

TRADE – Dynamics of Lao Exports to Main Markets

(source: ITC Trade Map 2014)



- **Vietnam** took 258,883 bags in 2014 (41%, 15,530 tons).
- The next largest buyers were **Japan** (119,000 bags, 7,114 tons) and **Germany** (59,000 bags, 3,542 tons).
- These three importers bought 70% of Lao coffee.
- **France** was the main buyer of certified organic Fair Trade coffee (about 1,000 tons in 2015) at a higher value of \$4,160/ton but for a very small volume.

[Click here for more TRADE information](#)

Takeaway: Over 40% of the *volume* of Lao coffee exports go to Vietnam – and Vietnam is a main exporter of cheap coffee to other destinations for Lao coffee..... BUT the *value* of the Japanese market is important.... [Click here](#)

PRICES – World Coffee, US\$/Kg



Source: The World Bank via Y-Charts

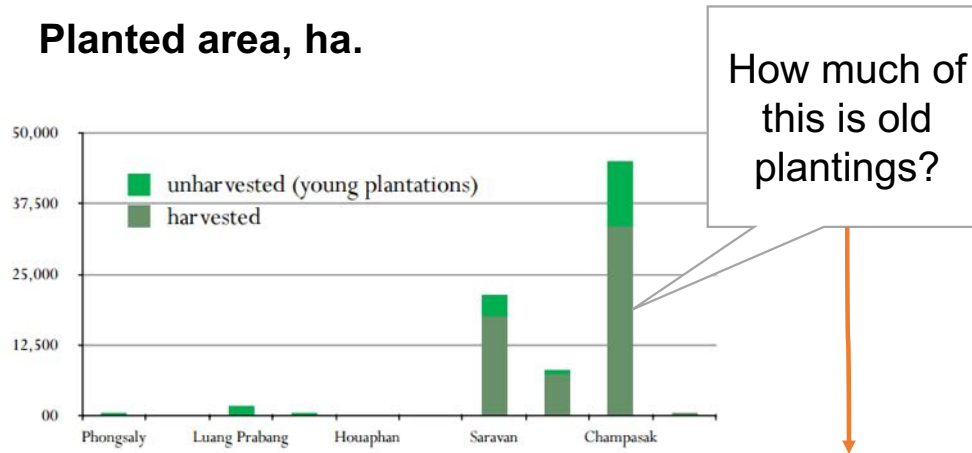
Click here [for LONG TERM PRICE TRENDS and ANALYSIS](#)

- Arabica prices average US\$3.70/Kg.; Robusta prices average US\$2.00/Kg.
- Arabica has an established and long-term **premium** over Robusta of on average \$1.70/Kg
- Average export price for Lao coffee is **\$2.70/Kg**

Takeaway: international coffee prices are unstable because a only few countries dominate supply. Investors must consider long-term trends in prices that show short peaks collapsing to the trends which show slight growth because supply has grown.

PRODUCTION – Lao coffee – main elements #1

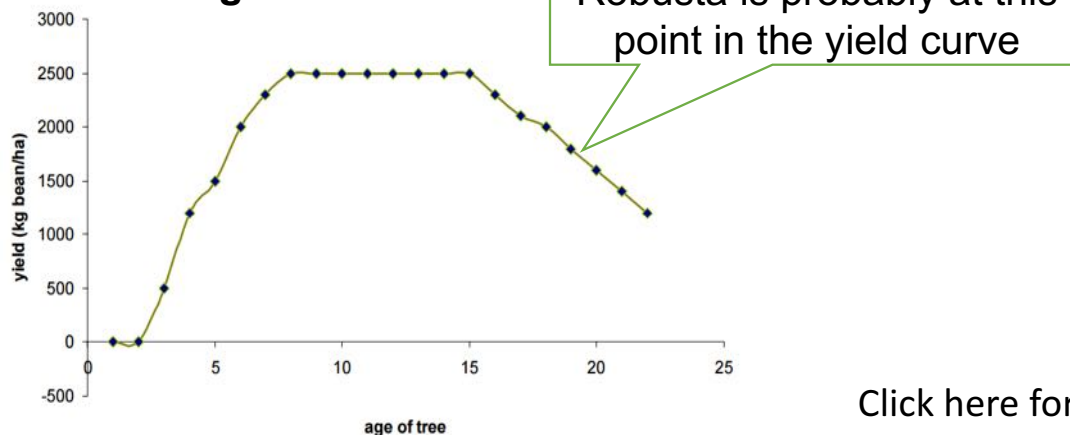
Planted area, ha.



There is much uncertainty about the condition of the main plantings.

New plantings being made by estate/commercial interests, but these are in the order of 1,000 to 3,000 ha. and only Arabica in the uplands where there is competition for cultivable land.

Yield - Kg/ha.



Takeaway:

Laos could lose as much volume of coffee as its entire annual export to Vietnam (15,000+ tons). This needs to be replaced with high quality Arabica – and the Northern Uplands provide a possible area for expansion

Click here for [Value Chain and Costs of Production](#)

PRODUCTION – Lao coffee – main elements #2

1. Labour (demographics)



A young population that does not want to work in agriculture; poor productivity from the older smallholders

2. Capital (processing)



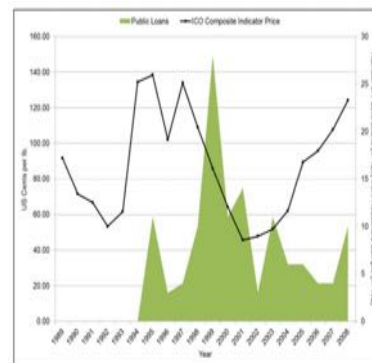
Predominance of sun drying reduces quality and even wet processing is often poorly done because machinery is out-of-date and not maintained.

4. Capital (investment)



Only large companies have the resources to invest in new planting – but mainly in the South.

3. Capital (Credit)




Bank lending has been ineffective. Informal lending is at high interest rates and there is considerable indebtedness by smallholders.

[CPC Credit Arrangement](#)

Takeaways:

- Labour is a major constraint – suggesting more capital intensive production
- The industry is driven by *people* and *money*, not just by agronomy

VALUE CHAIN – from bean to cup

Value Chain Element	On-farm	Green bean			Roast	Retail
Consumer cup via coffee franchise/café						125.00
Consumer retail shop price in 1Kg pack						30.00
VALUE ADDED BY DIFFERENT AGENTS:						
Cost of FAQ roasted beans to supermarket shelf						15.00
Total costs to Wholesaler						15.00
Packaging, marketing and distribution					5.00	
Roasting costs/Kg					5.00	
Cost of raw material for roasting				5.00		
Middle-man exchanges				0.79		
Conversion to 1 Kg roasted @ 1.2				4.21		
Import duties and distribution			3.51			
Landing costs, wastage @30%			0.81			
EXPORT TO CONSUMING COUNTRY						
Export value/Kg		2.70				
Shipping		0.10				
Documents and tax		0.60				
Marketing		0.20				
Green bean conversion @ 6:1		1.80				
On-farm, Kg Cherry	0.50					
Value (US\$/Kg)	0.50	5.40	4.32	10.00	10.00	30.00
Value (% supermarket retail)	2%	18%	14%	33%	33%	100%

- Grower receives just 2% of the final supermarket shelf value.
- 20% of the total value is accrued in the growing country through growing the coffee, converting it to marketable green bean.
- The balance of value – 80% - is accrued in the consuming country by importers, roasters and retailers.

Takeaway:

The structure of the international industry prevents the green bean exporter getting a greater share of the value.

MARKET FACTORS – elements in marketing Lao coffee #1

1. Infrastructure

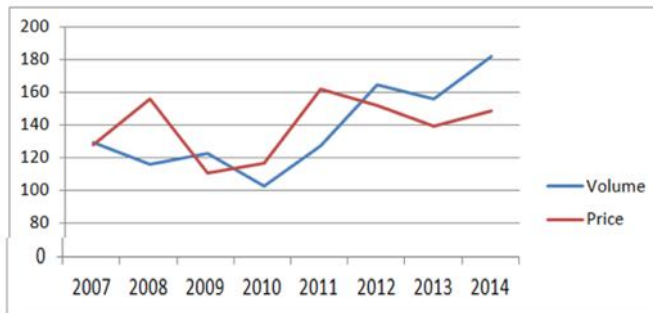


Supply aggregation is the key factor in developing a volume commodity (bulk) business. infrastructure needed includes:

- farm access roads,
- major supply routes
- capacity to reliably export containers of large volume.

The Bolovens has all of these, whereas the North does not, although the [North-South corridor](#) does open the way to China

2. Quality



Improving the quality of the coffee is a prime element of the vision statement in the Coffee Sector Development Strategy.

BUT... "quality is in the eye of the buyer" Vietnam buys the largest single volume of Lao coffee; and Vietnam determines the world price of this segment.

Takeaway: the price of Lao coffee via the quality/type of coffee in most demand is determined by the Vietnamese. Producing better coffee for this market will not impact price positively but it will increase costs. This suggests diversification of production to the North where infrastructure has to be improved.

MARKET FACTORS – elements in marketing Lao coffee #2

3. Certification, branding, packaging



- **Certification:** Evidence suggests that only a small proportion of the “Fair Trade” (or organic) premium gets back to the grower; there may be some reason to identify Lao quality Arabica coffee, but for a very small niche market and for domestic sales. Most Lao coffee is blended or used in manufacturing.
- **Branding:** this is a corporate level decision – naming the given product.
- **(Packaging and labelling:** are usually very poor and need standards for retail sales and for export packs.

4. Retailing in Laos

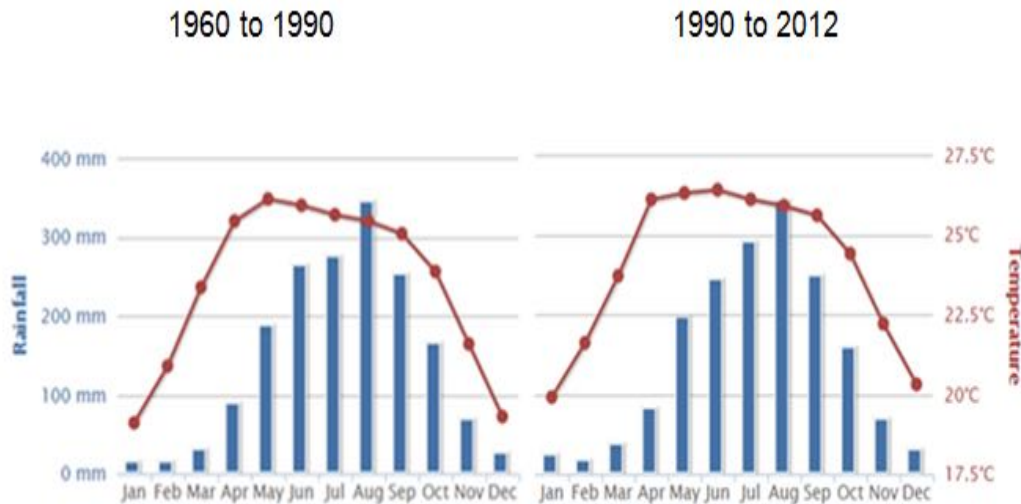


- There is no “coffee culture” among ordinary Lao people and in general the way coffee is retailed is quite poor.
- A café culture has begun in tourist areas; this needs to be encouraged especially at the international airports. It is estimated that a further 200 tons of consumer coffee (i.e., roasted or ground) could be sold just at airports with proper promotion.
- Restaurants, hotels and cafes should be the focus of a promotional campaign aimed at selling more Lao quality Arabica locally.

Takeaway: Volume export sales of low value coffee benefit the exporters but do little for the industry as a whole. Efforts to establish a “Lao certification” needs to be very focused on Arabica and on domestic sales which can be increased.

CLIMATE CHANGE

Rainfall and Temperature in Laos



Source: World Bank Climate Portal

- Anecdotal reports suggest that the dry season in Laos is becoming longer, droughts are more frequent and more severe, and the incidence of unusual and extreme flood events is escalating.
- But the objective evidence (see chart) may indicate that Laos will escape the worst effects. Note below
- Other coffee growing countries e.g., Brazil, are expected to suffer considerably from climate change with adverse impact on their coffee production.

Note: the reported official data may be quite inaccurate

Takeaway: whatever the real impact of climate change in Laos becomes, promotion of coffee as a long-term perennial cash crop under forest shade is climate friendly and a fairly resilient agricultural system.

SUMMARY – Findings and Recommendations

FINDINGS

Lao coffee in the world market

- Price-taker
- Very concentrated set of importers

Production and processing issues

- Concentration in a small area (Bolovens)
- Age of the trees (Robusta)
- Inefficient technology = poor quality

The value chain, from cherry to cup

- Poor smallholder extension services
- Cumbersome export procedures
- Low labour productivity, poor access to credit

Marketing

- Quality is generally FAQ. Almost all exports are for blending or manufacturing use
- Certification and branding is confused and poor (packaging, labelling)
- Domestic retail is very poor

Climate change

- Impact unclear

Implications for the Northern Uplands

- Reasons and potential for development

RECOMMENDATIONS

- Conduct in-depth **study of export markets** and consumer requirements for a **business support programme**
- **Survey Bolovens plantings** and develop plan for re-planting
- **Simplify export procedures** according to AEC to be competitive
- Develop coherent and consistent approach to **certification; develop labelling standards**, branding and packaging
- Promote **effective domestic retailing** especially at international airports and tourist locations
- Develop a **Northern Uplands coffee investment plan** focused on high quality Arabica

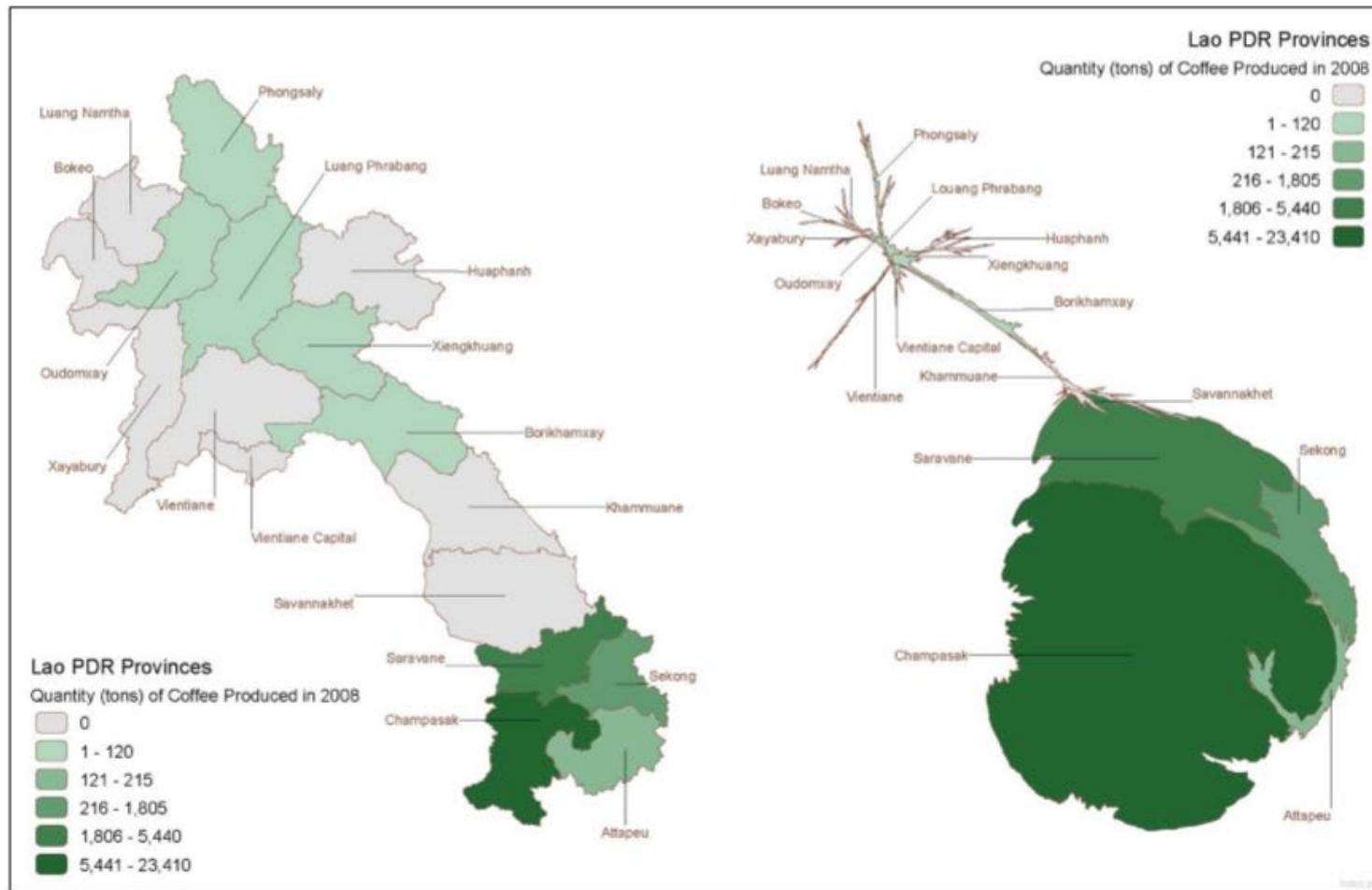
The following slides supplement the main presentation and are linked to the main slides where they are referenced



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Latte, Saffron Cafe, Luang Prabang

Laos Coffee Output



The cartograph (left) shows coffee output as a standard map; the choropleth on the right represents the data proportionately.

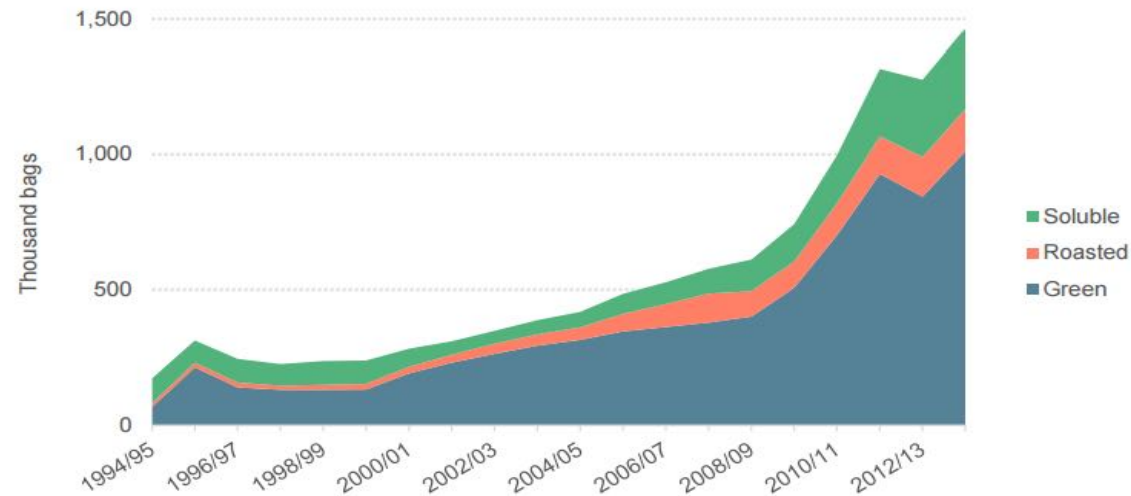
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Coffee Production in China



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CHINA – Imports of Coffee (source ICO)



The China imports mainly green beans and the coffee market is currently mainly composed of instant coffee. Indeed, instant coffee makes up around 99% of retail sales by volume and 98% by value, although fresh-roasted coffee is reported as growing at a faster rate in the last two years.

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Coffee statistics for China (source ICO)

	Production	Consumption	Exports	Imports
1994/95	54	180	58	173
1995/96	53	255	24	313
1996/97	50	220	196	245
1997/98	60	109	166	225
1998/99	104	167	124	236
1999/00	146	245	109	238
2000/01	193	282	186	282
2001/02	287	337	212	309
2002/03	324	396	265	348
2003/04	386	448	283	387
2004/05	361	514	240	418
2005/06	365	544	301	485
2006/07	428	576	352	527
2007/08	433	606	401	577
2008/09	555	623	530	611
2009/10	1 173	994	563	742
2010/11	827	1 271	633	995
2011/12	1 090	1 312	969	1 314
2012/13	1 534	1 488	1 269	1 275
2013/14	1 947	1 891	1 170	1 463
Growth rates				
1994-2013	21%	13%	17%	12%
2004-2013	21%	16%	19%	15%

Look at the significant increase in all the variables since 2011.

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In thousand 60kg bags

TRADE #1- World trade in coffee (source: ITC Trade Map 2014)

Importers	Per Capita Incomes (US\$,GDP/PPP)	Trade Indicators			
		Value imported in 2014 (USD thousand)	Quantity imported in 2014	Unit value (USD/unit)	Share in world imports (%)
World		31,064,470	7,826,520	3,969	100
United States of America	54,370	5,882,105	1,524,987	3,857	18.9
Germany	42,216	4,017,856	1,162,075	3,457	12.9
France	40,538	2,655,147	356,231	7,453	8.5
Italy	35,131	1,707,942	546,763	3,124	5.5
Japan	37,519	1,442,251	416,845	3,460	4.6
Canada	44,967	1,305,181	254,398	5,130	4.2
Netherlands	47,960	1,129,158	232,308	4,861	3.6
Spain	33,835	1,051,326	302,254	3,478	3.4
Belgium	43,139	1,048,748	281,244	3,729	3.4
United Kingdom	39,826	833,172	188,317	4,424	2.7
Switzerland	58,149	725,143	152,747	4,747	2.3
Russian Federation	24,449	571,602	154,526	3,699	1.8
Korea, Republic of	35,379	527,287	133,732	3,943	1.7
Sweden	46,219	527,029	115,150	4,577	1.7
Austria	46,640	481,074	66,291	7,257	1.5
Australia	46,550	478,209	91,452	5,229	1.5
TOTAL or AVERAGE	45,126	24,383,230	5,979,320	4,828	78

- World imports of coffee (all types) totaled 7.9 million tons in 2014 valued at US\$31 billion, an average unit value of \$3,969/ton.
- The **USA** took 1.5 million tons (18.9%) and **Germany** another 1.2 million tons (12.9%) followed by **Italy** with 0.6 million and **Japan** with 0.4 million tons. **France** is an important high value market.

Takeaways:

- **Most of the world's coffee that is produced in the poorest countries is consumed in the richest countries**
- **The top 15 importing (all rich) countries account for 78% of trade (6 million tons).**

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TRADE #2 — Lao Exports to Main Consumer Markets (source: ITC Trade Map 2014)

Importers	Trade Indicators			
	Exported value 2014 (USD thousand)	Exported quantity (tons)	Percent of Total Exports	Unit value (USD/unit)
Total	99,728	37,545	100	2,656
Japan	21,434	7,114	18.95	3,013
Germany	9,313	3,542	9.43	2,629
Belgium	8,375	2,599	6.92	3,222
United States of America	4,191	1,532	4.08	2,736
France	4,135	994	2.65	4,160
Italy	3,178	1,496	3.98	2,124
Spain	609	174	0.46	3,500
Sweden	82	19	0.05	4,316
Korea, Republic of	50	13	0.03	3,846
Russian Federation	14	1	0.00	14,000
TOTAL or AVERAGE	51,381	17,484	46.57	2,939

Note: this table deliberately excludes Vietnam, to focus on the rich, developed countries

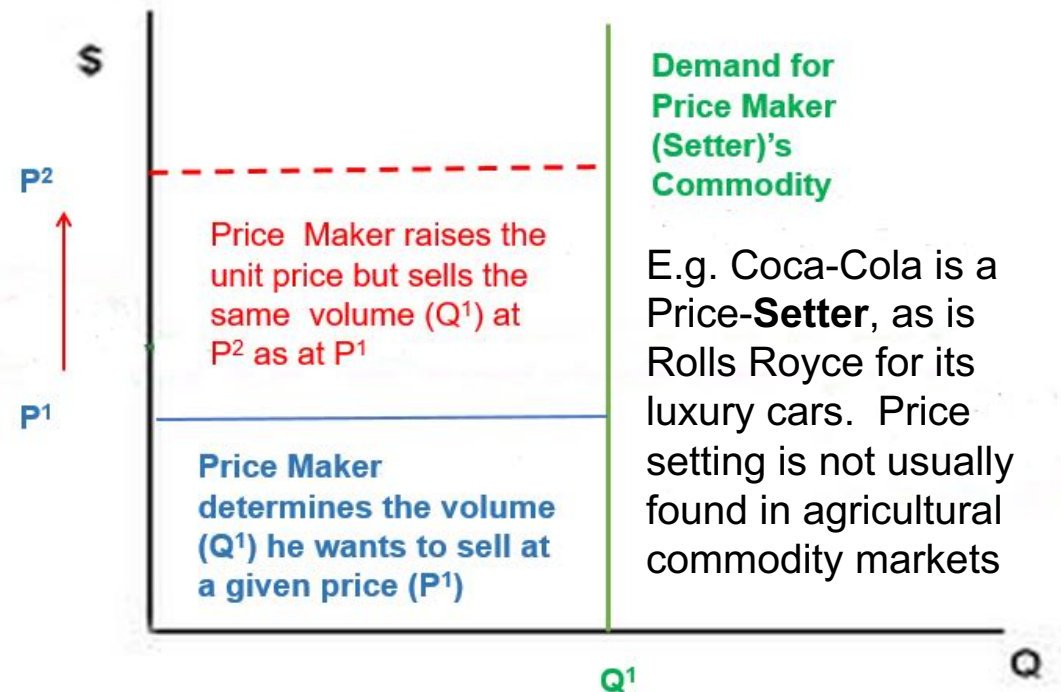
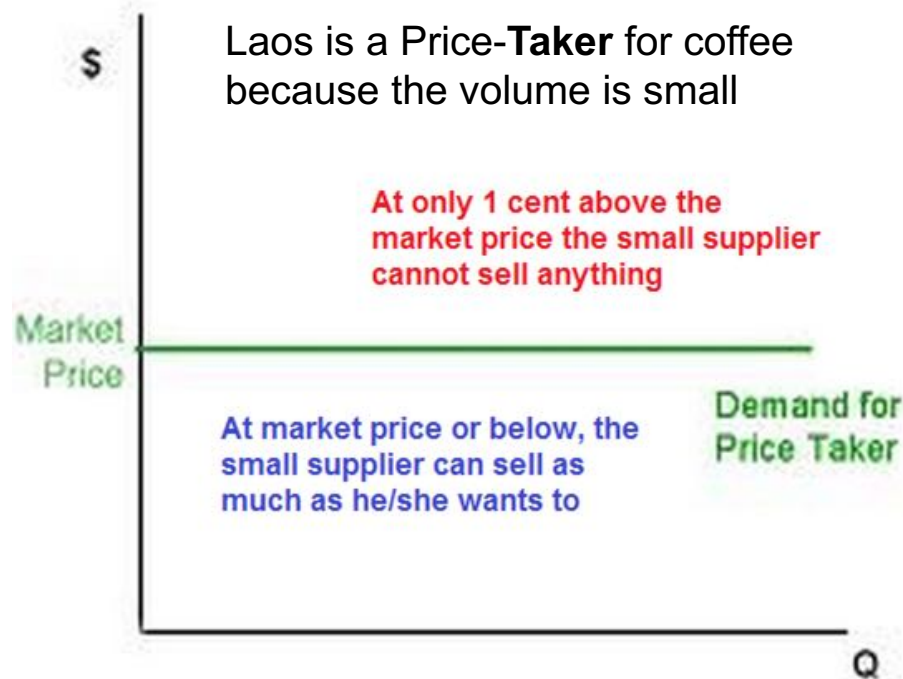
Laos exported a total of 625,750 bags of coffee of all types in 2014 (37,545 tons).

- 47% of the total of Lao coffee exports go to the rich consuming countries.
- Only 6 of these importers received commercial volumes above 1,000 tons (France is a little lower).
- The average price paid by these importers for Lao coffee was \$2,981/ton compared to the average price paid for all their coffee imports of \$4,180/ton.

Takeaway: Japan and Germany are the main buyers of Lao coffee aside from Vietnam. These two countries take 28% of Lao total coffee exports.

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Laos as a small coffee producer – “Price taker”

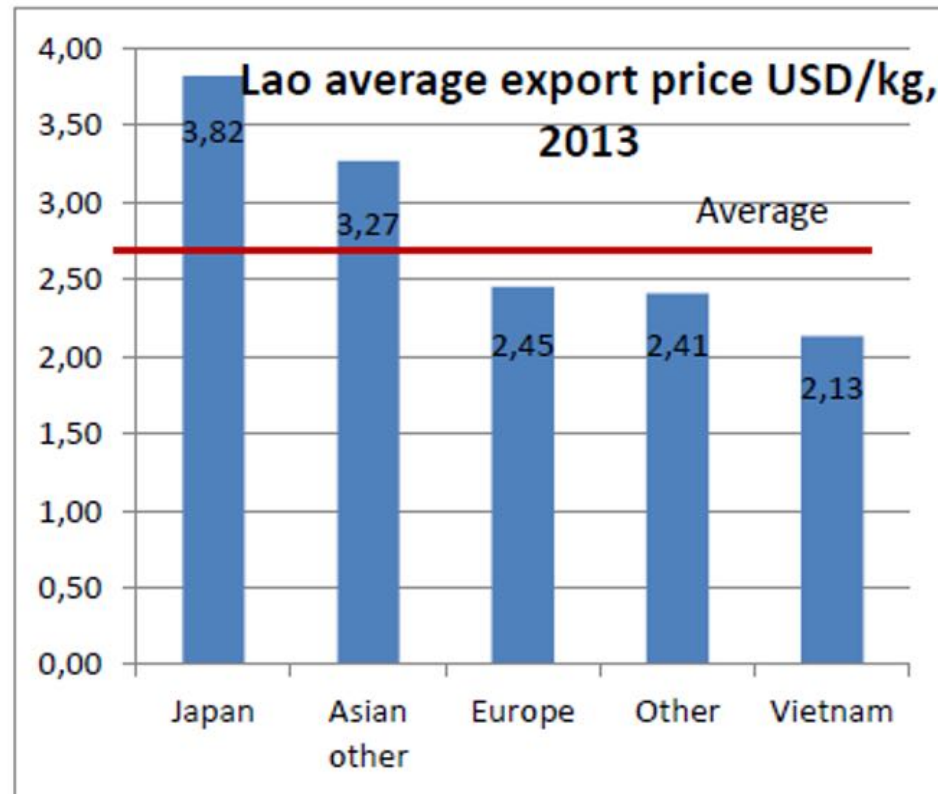


E.g. Coca-Cola is a Price-**Setter**, as is Rolls Royce for its luxury cars. Price setting is not usually found in agricultural commodity markets

The rule applies to individual segments. What cannot be sold in one segment may nevertheless be sold in one with a higher price boundary. However, quality pursued within a segment that does NOT raise the price boundary is a *cost* not a benefit.

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Average Export Prices (US\$/Kg)

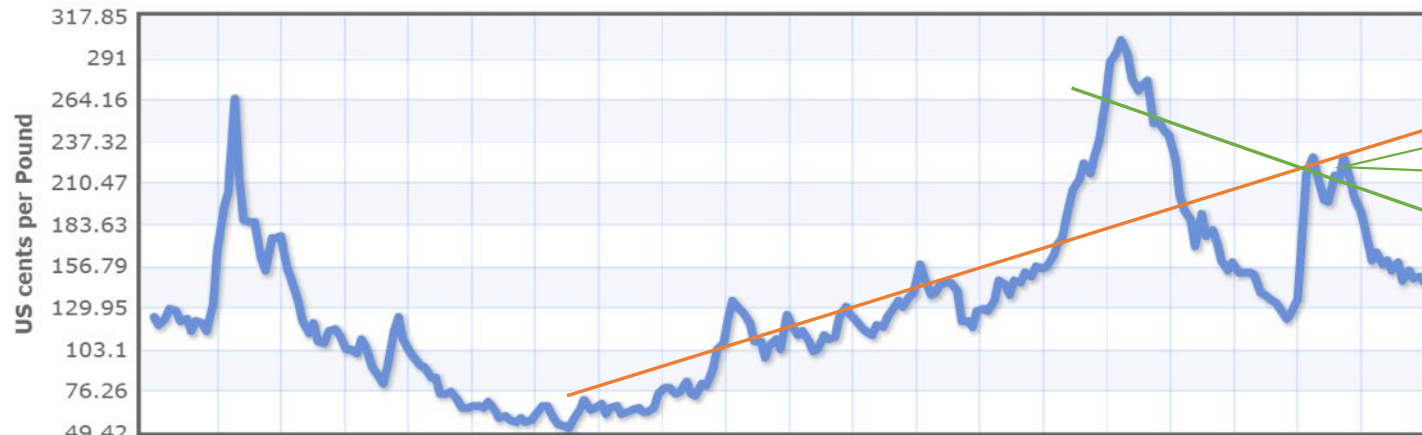


Source: Pirotte and Thiphavong. Op. cit. Annex 7

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Long term world coffee prices – 20 year series

Arabica



Robusta



New York
cash prices
ex-dock New
York, ICO

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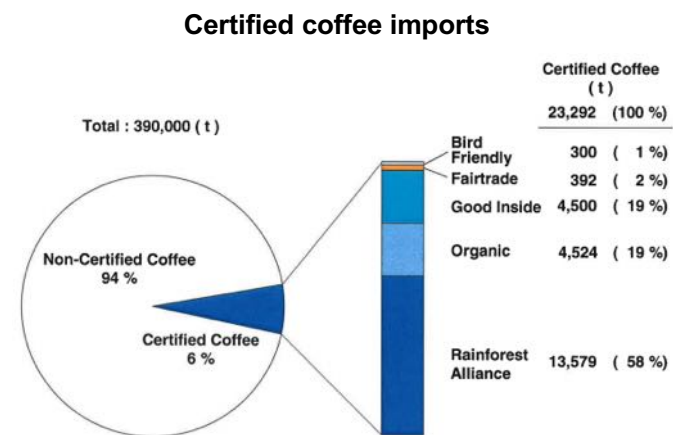
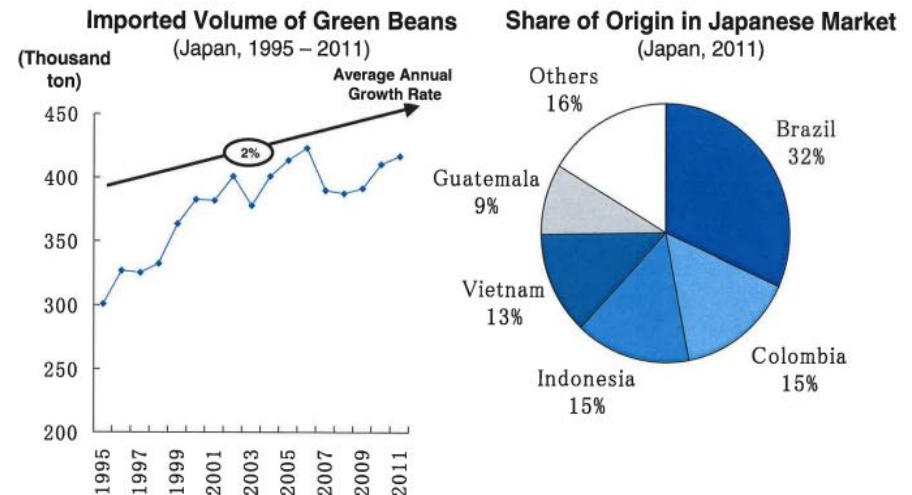
JAPAN – Imports – good example

The **volume** of Lao coffee exported to Japan (7,114 tons) and Vietnam (15,530 tons).

Multiply these weight values by the unit **dollar values** received for 2014.

- The Japanese market is worth **\$21.43 million**, the Vietnamese market is valued at a total of **\$35.2 million**;
- Whereas the Japanese market for Lao coffee is 46% of the Vietnamese market by volume, by **dollar value** it is 60%.
- The Japanese retail market has an interest in good organic coffee (so long as it tastes good!) and the market value is at least becoming comparable with that of Vietnam.

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Low Grower Productivity



(1) Planting



(2)
Tending



(3)
Picking

- Space between is often not adequate in Laos. Many small plantations do not follow best practices.

- Pruning is not performed often in Laos. Coffee output is greatly reduced as a result.

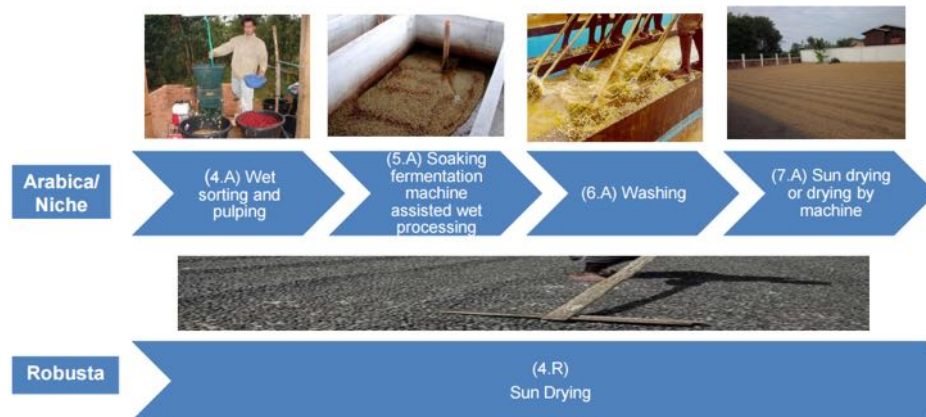
- Picking is much more selective for arabica than for robusta.
- There is a labor shortage during harvest season.

Source: IFC

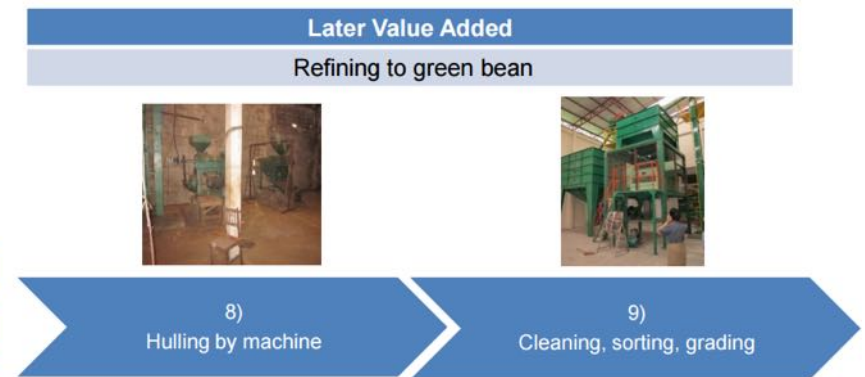
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Lack of capital for investment in primary and secondary processing.

Early Stage Value Added Activities



Later Stage Value Added Activities



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SUMMARY OF INDUSTRY CHALLENGES: Based on analysis by IFC

(Lao PDR Coffee Sector Scoping & Design Study of Lao PDR SME Development in Selected Agriculture Sub-sectors and Value Chains Final Report February 2011)

Challenge	Reason	Potential intervention
Asymmetric access to finance for SMEs and cooperatives	Preferential interest rate policies; weak financial literacy among businesses	Develop financing facility and improve financial literacy
Few lead buyers	limited FDI	Court foreign investors through joint venture and/or provincial investment profiles
Weak Business Enabling Environment	Underfunded government institutions/extension services; tax /concession policies that are not consistency enforced	A multipronged approach is necessary to solve issues along the value chain
Limited Access to sustainable infrastructure and technologies	Underdeveloped financing mechanisms; variable returns on investment	Consider funding wet mills for the most isolated communities and providing SMEs with financing

Source: IFC

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Leading Commercial Companies

	Investment Interest	Revenue / Scale Attractiveness	Management capability	Comments
Dao Heuang	Yes Strong	High Approx. \$26.8M in green coffee exports alone in 2010	Medium	Spinning off coffee business from DH Group; stock listing 2011; strong access to credit; dominant player; range of coffee products incl. instant; red flags raised by industry stakeholders.
Sinouk Coffee	Yes Strong	Low-Medium Est. \$500-700K	Low	Assets include coffee outlets and coffee plantation/resort, national brand; organic market play; lynch pin is to secure enough production volume – currently in question .
Lao Mtn. Coffee	Yes Med	Low–Medium “Upper six figures”	Low	Lifestyle business; only interested in investment for a game changing revitalization of LMC vertically integrated coffee business focusing on quality – involve land, new roasting equipment etc.
Olam / Outspan	Yes Initial	High Approx. \$31.5M once 3,000 ha reach maturity	High	Major international agriculture powerhouse + \$5B USD market cap. Interested in expanding operations in Laos within the coffee sector primarily through plantation, processing , trading and contract farming. International best practices and transparency.
Thai Hoa	Yes Initial	High but variable \$1.8M to \$83M depending on concessions	Medium	Major international trader with experience in the plantation business; IPO this month; unclear whether the 5,000 ha it hopes for in Laos will be granted.

Source: IFC: op. cit

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COFFEE PRODUCTION IN LAO – focus on production

economics and the value chain — we are *NOT* discussing the commercial structure of the industry in detail since it is well-known (it is covered in the text report but here is a [summary of challenges](#) and of the [leading commercial companies](#))

Value Added (%) by different stages of on-farm cultivation

Type of coffee	Land	Fertilizer	Pesticides	Maintenance	Harvest
Arabica (Smallholder)	27.50	0.00	0.00	27.50	45.00
Arabica (Commercial)	3.60	37.00	0.00	8.60	50.80
Robusta (Smallholder)	30.20	0.00	0.00	30.20	39.60

Source: 'Integrated Value Chain Analysis of Selected Strategic Sectors in Lao People's Democratic Republic', Global Development Solutions, LLC™, September 2005

NOTE: For more information on **production costs** ... [click here](#)

Takeaways:

- **Smallholders** (a) the value-added is in the provision and preparation of the land and (b) maintenance is an important element.
- **Commercial/plantation sector** - the use of fertilizer is the key element pre-harvest allowing the plantation to obtain higher yields.
- **Labour supply** for the harvest is critical in both sub-sectors
- **Provision of extension services** is another critical element in development [Back to main slide](#)

Production Costs – very tentative estimates

World Bank, Value Chain Survey 2005

Type of coffee	Yield rate (kg/ha.)		Cost	
	Cherry	Clean coffee	Kip/kg	US\$/Kg
Arabica (Smallholder)	3,600	576.0	7,569.00	0.95
Arabica (Commercial)	4,200	693.0	11,957	1.49
Robusta (Smallholder)	1,500	300.0	9,500	1.19

NUDP Survey in Phongsaly, Khua District, 2015

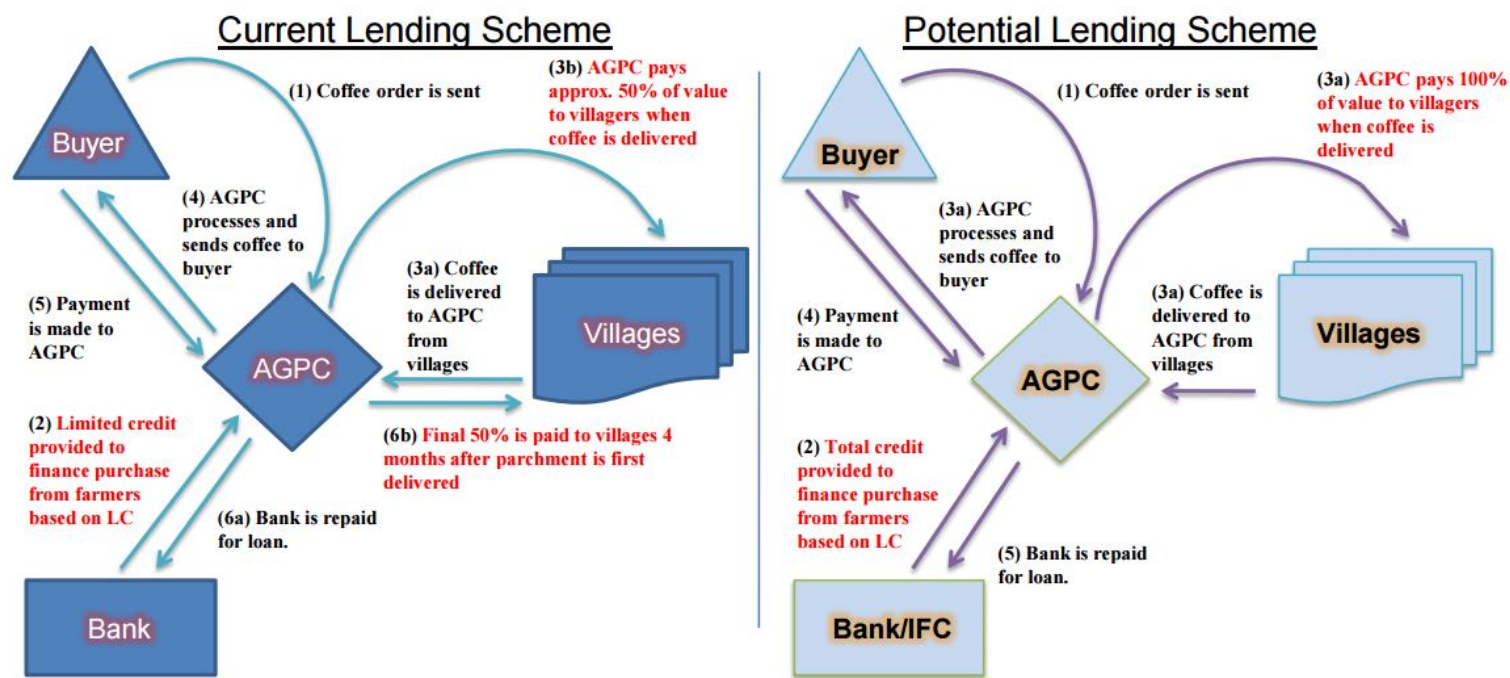
	Year 1	Year 2	Year 3	Year 4	Year 5
Cost (US\$/Ha.)	1,634.38	1,218.75	2,171.88	2,212.50	2,350.00
<i>Of which:</i>					
Material inputs (cash outla	490.63	668.75	1,184.38	1,331.25	1,518.75
Material Input Cost (US\$/Kg.)				0.44	0.30
Yield (Kg/ha.)	0.00	0.00	0.00	3,000.00	5,000.00
Sale price (\$/Kg cherry)	0.00	0.00	0.00	0.23	0.23
Revenue/ha.				675.00	1,125.00

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Credit Arrangements for CPC

An RSF intervention could improve the lives of AGPC's farmer network by shortening payment schedules.

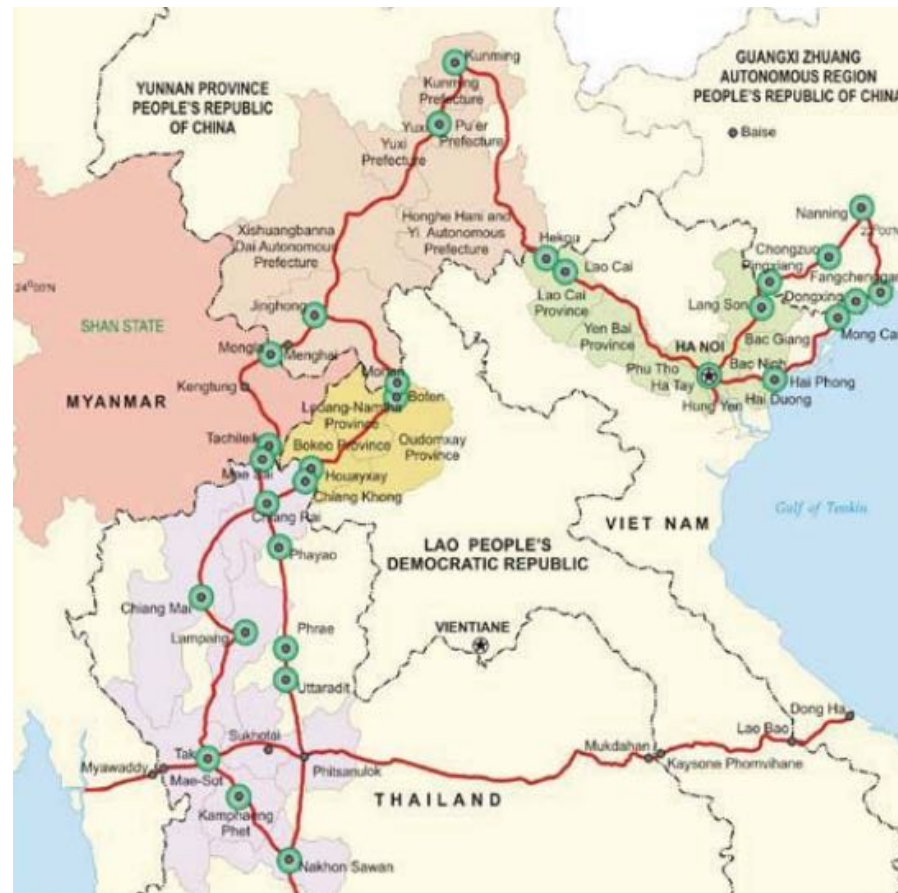
Asymmetric Access to Finance



Source: IFC. op.cit.,.

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North-South Corridor



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END OF PRESENTATION

THANK YOU



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