



ECONOMIC ANALYSIS



Framing question 1:

WHAT IS THE CONTRIBUTION OF THE VALUE CHAIN TO ECONOMIC GROWTH?



Core question 1.1:

How profitable and sustainable are the VC activities for the entities involved?

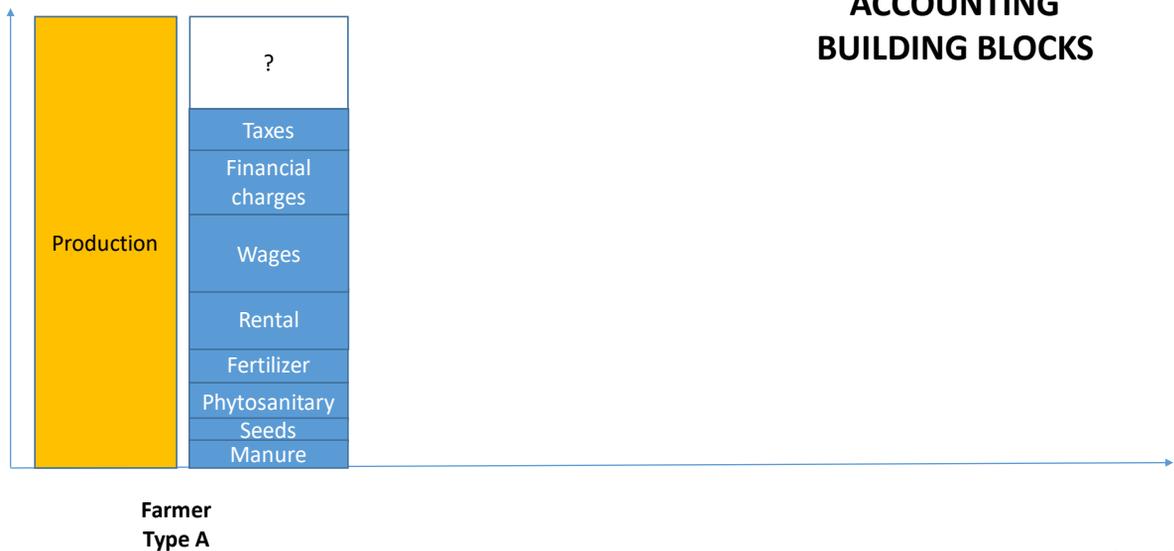
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What is the contribution of the value chain to economic growth?

How profitable and sustainable are the VC activities for the entities involved?



ACCOUNTING BUILDING BLOCKS



What is the contribution of the value chain to economic growth?
 How profitable and sustainable are the VC activities for the entities involved?



**ACCOUNTING
 BUILDING BLOCKS**



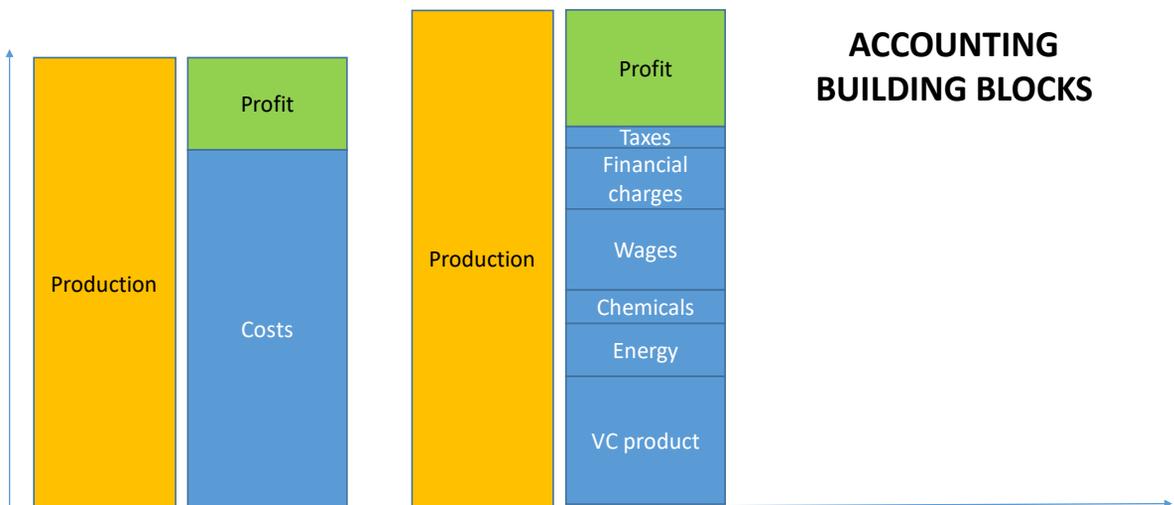
Farmer
 Type A

Financial analysis₃

What is the contribution of the value chain to economic growth?
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**ACCOUNTING
 BUILDING BLOCKS**

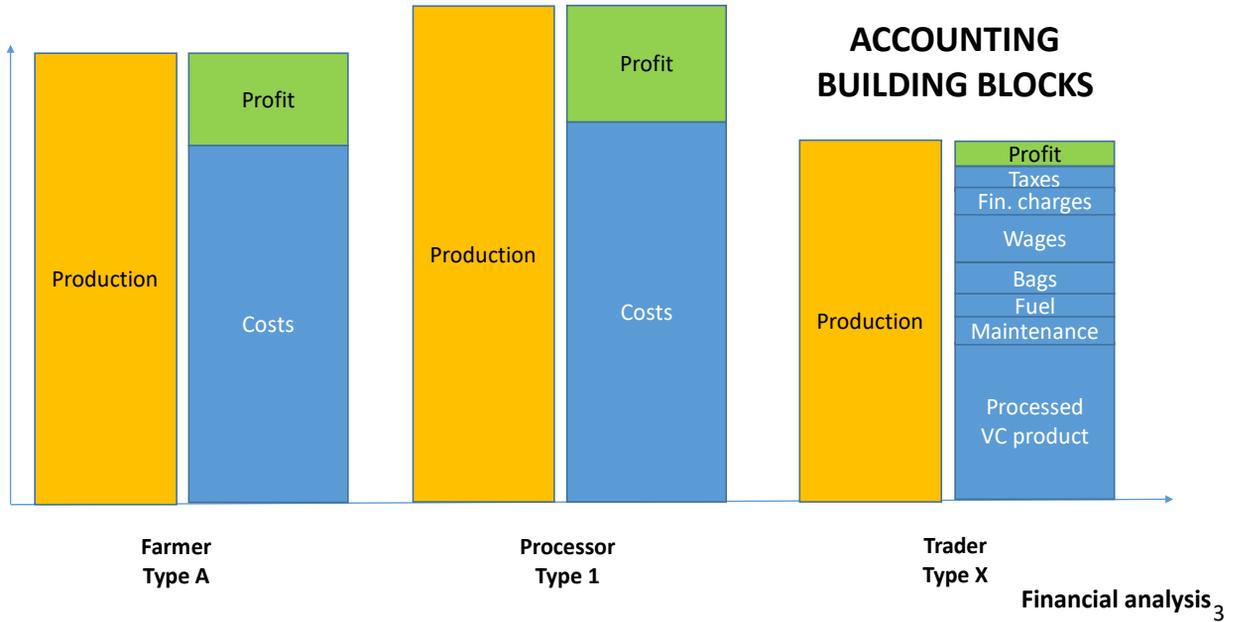


Farmer
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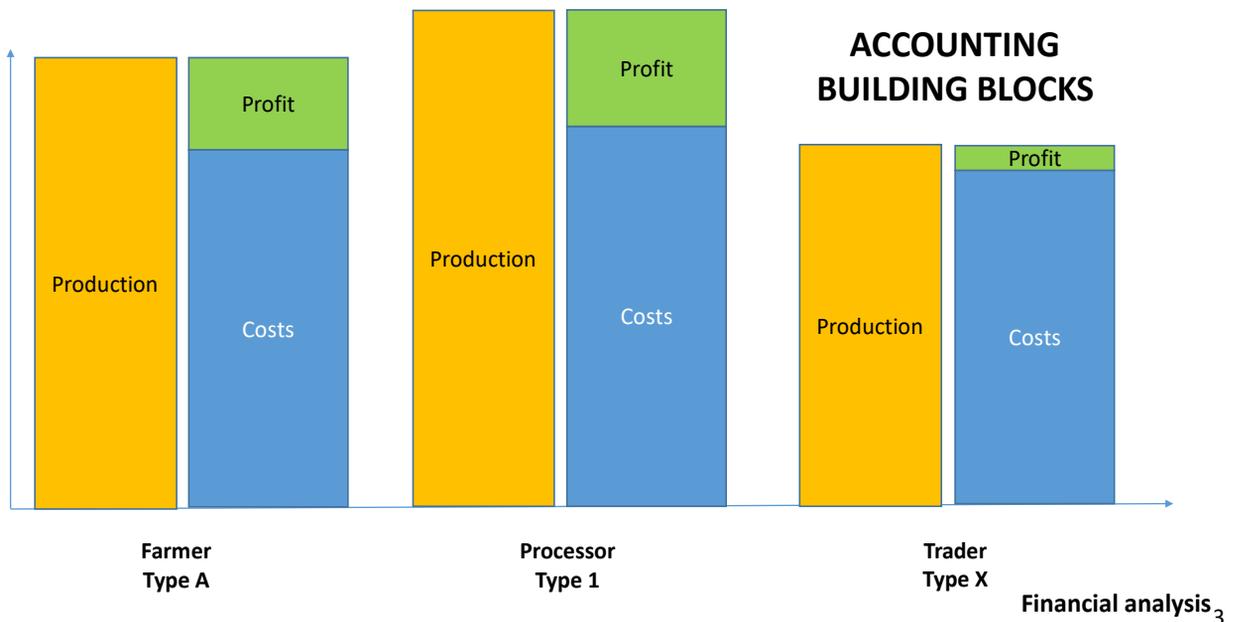
Processor
 Type 1

Financial analysis₃

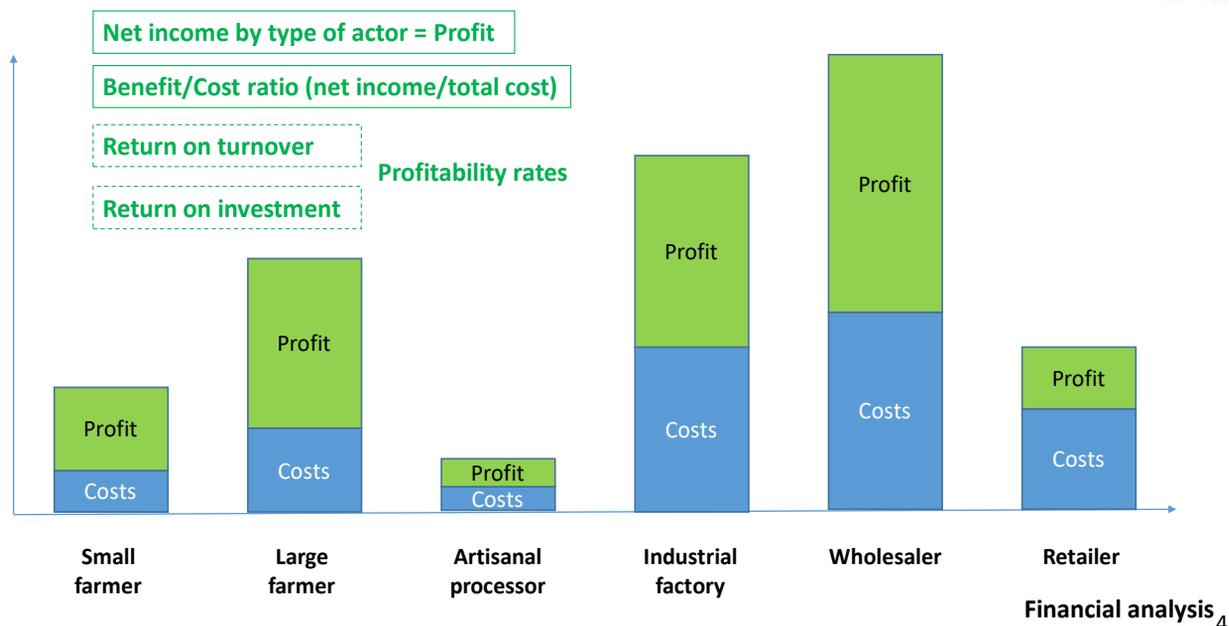
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Cambodia Aquaculture



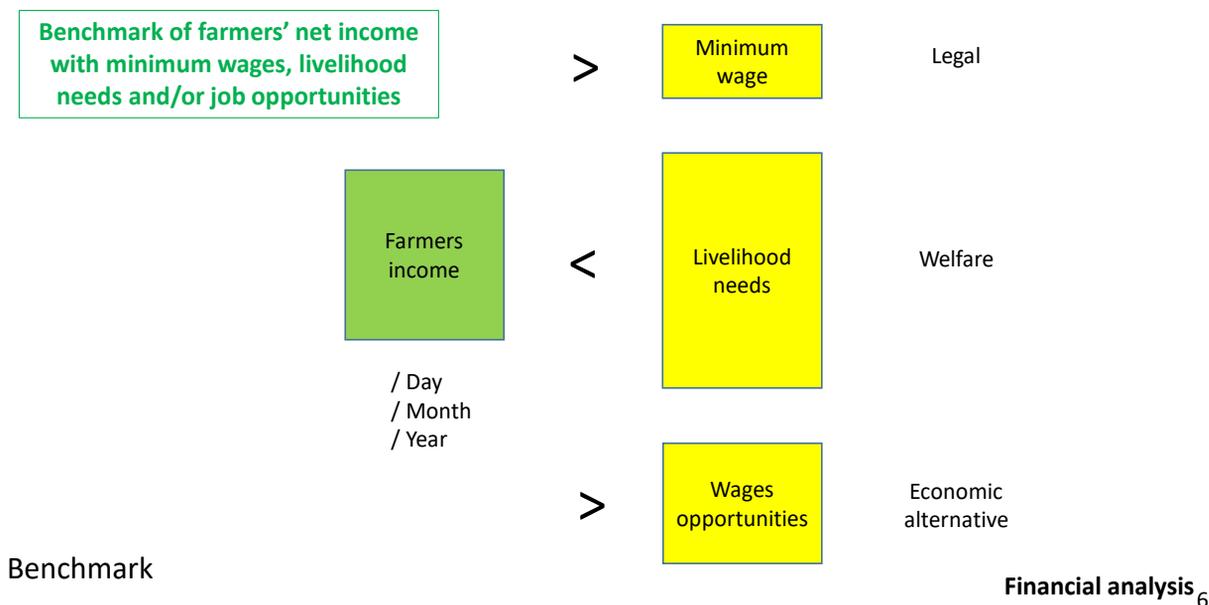
	SI ponds low input producer	SI ponds high input producer	Cage producer	Int. Ponds producer	Trader	Processor	Retailer
Output kg	234	6,274	1,695	41,082	515,000	84,000	16,000
Output €	285	8,114	2,187	64,649	825,502	106,409	51,661
Costs	191	7,470	2,125	53,958	776,463	80,377	36,264
Net profit	94	644	62	10,691	49,039	26,032	15,397
Benefit/ cost ratio	49.2%	8.6%	2.9%	19.8%	6.3%	32.4%	42.5%
Return on turn over	32.9%	7.9%	2.8%	16.5%	5.9%	24.5%	29.8%

Due to the relatively high costs of consumables, farming fish is weakly viable for some types of producers, such as cage producers (home-made feed being the major cost) or high input semi-intensive producers.

The net profit is high for the traders because of the volume of their sales but the profitability rates are low.

The profitability rates are particularly high for the low input semi-intensive producers, the intensive producers, the processors and the retailers.

What is the contribution of the value chain to economic growth?
How profitable and sustainable are the VC activities for the entities involved?



Cassava Ivory Coast



Activities are profitable. However, income remains limited for agricultural production activities (annual gross operating incomes vary between 25,000 and 39,000 CFA per farm) and especially for processing (between 10,000 and 33,000 CFA per unit). Thus, the average farmer's gross monthly income is only about CFA 15,000; and for processors, a 10% change in the cassava purchase price (on the rise) or sale (on the decline) can provoke losses.

Production costs and therefore farm operating incomes are influenced by the regional location of crops, the cultural practices, the degree of remoteness of farms, the type of labour and the land situation. Producers are also confronted with volatile prices and the risk of a slump in sales. Moreover, artisanal processing units are breaking even. Industrial units are the most profitable, but only represent 5% of processed volumes. The situation for traders is more comfortable due to the expansion of urban markets. Cassava-related activities are developing through the emergence of new retail outlets in urban centres and through export channels, particularly for attiéké.

Café Honduras



la mayoría de jornaleros, cortadores, minifundistas y pequeños productores se encuentran en situación de vulnerabilidad frente a la pobreza, la inseguridad alimentaria, los riesgos climáticos y fitosanitarios, así como la disminución de los precios internacionales del café.

Una alta proporción de los productores de café convencional, con menos de 3 manzanas, no logra generar un ingreso equivalente al costo de la canasta básica o al salario mínimo agrícola.

Egg Zambia



All categories of egg producers are profitable and the return on turnover ranges from 5% for small-scale producers to 24-31% for large-scale producers.

At the small scale end, the average annual earnings of €416 tends to be supplementary household income as it is well below the annual minimum wage of €714 or the annual living wage in Zambia, which is estimated at €3,403.

For medium-scale producers the average net annual income is €2,578. It is the only category that the family is engaged in. However, that requires investing in battery cage production systems while access to finance is still very expensive, (annual interest rates exceed 30%).

It is only when producers reach the scale of about 1,750 in-lay birds that the net income from the operation is able to support the average family.

Egg trading is profitable for all traders as the margins exceed 11% for supermarkets, community-based wholesalers and retailers.

Margins are very tight for wholesalers based in urban markets, estimated at 7%. However households who are dependent on this trade can sustain their livelihood as average net earnings (over €7,000 per annum) exceed the annual living wage in Zambia.

The net earnings generated for community-based retailers is estimated at €242 per annum, which is an important supplementary income for poor urban households also selling other essential food items.

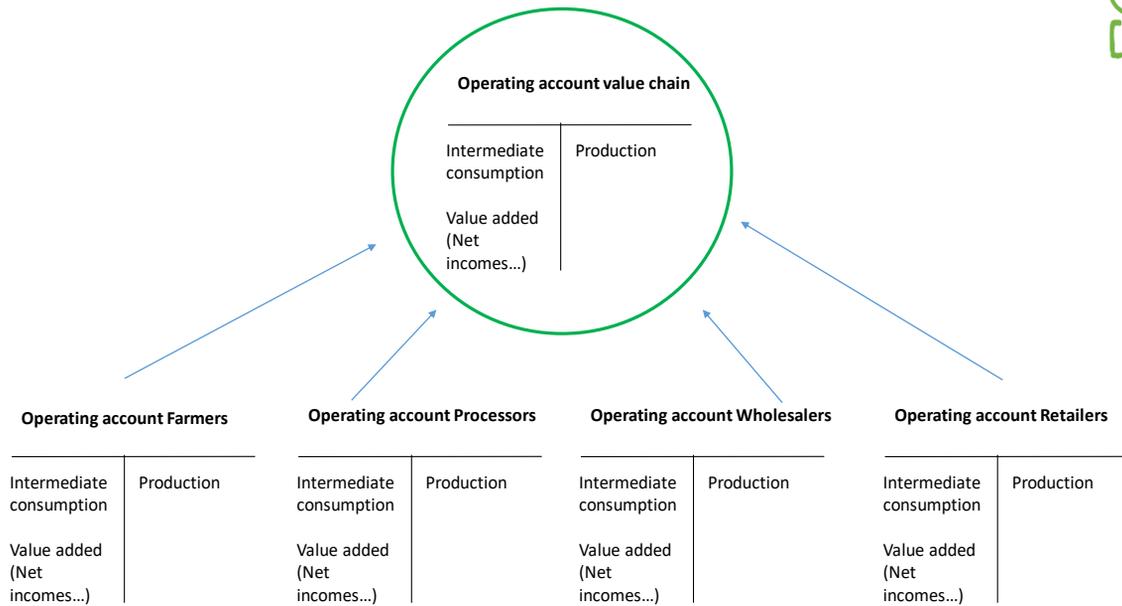
Cashew Sierra Leone

With a 2.5 ha farm (median holding of a farmer), a farmer can, in many likelihoods, earn annual profits (after deducting cost of production) almost equivalent to the living wage (USD 800) in the country. Cashew can, therefore, be a poverty alleviation tool. 8

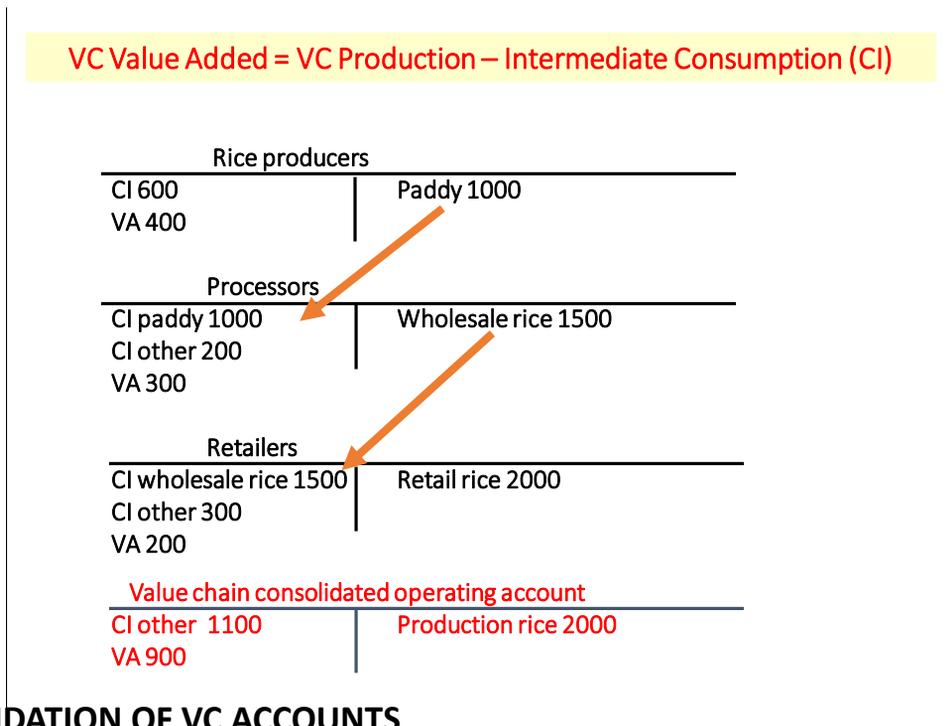


Core question 1.2:

What is the contribution of the value chain to the GDP?



CONSOLIDATION OF VC ACCOUNTS



The operating account

Elaborated with actual market values (valuing actual flows at prices used or actual market prices)

le not taking into account flows that do not constitute actual market exchange (no valuing family labour at opportunity cost or other shadow prices) except for the farmers' home consumption

*Separate Depreciation and Net income only if depreciation is relevant and available

**No valuing familial labour

***Only in case of actual rental or metayage

****Valuation of farmers self-consumption

INCOME	
Sales	
Self-consumption****	
Direct subsidies	
EXPENSES	
Intermediate Goods and Services	
Imported IGS	
-	
-	
Domestic/local IGS	
-	
-	
Added Value	
Wages / Salaries**	
Financial charges	
Taxes	
Land rental***	
Gross Income / Operating Profit*	

What is the contribution of the value chain to economic growth?

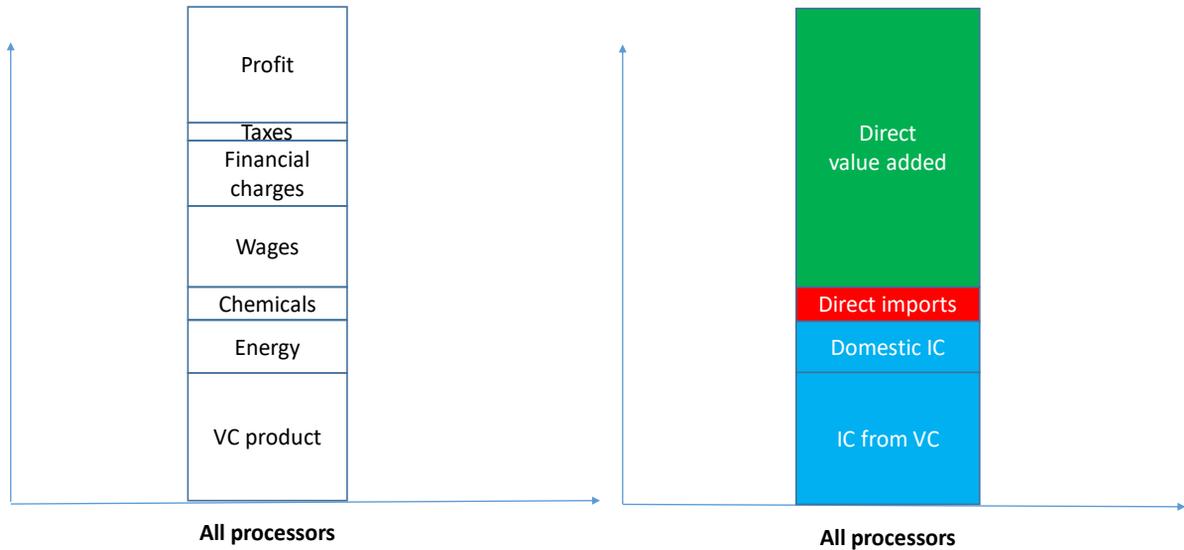
What is the contribution of the value chain to the GDP?



CONSOLIDATION OF VC ACCOUNTS

- 1) 1 Farmer Type A → All farmers Type A → All farmers
- 2) Costs → IC and VA

What is the contribution of the value chain to economic growth?
 What is the contribution of the value chain to the GDP?

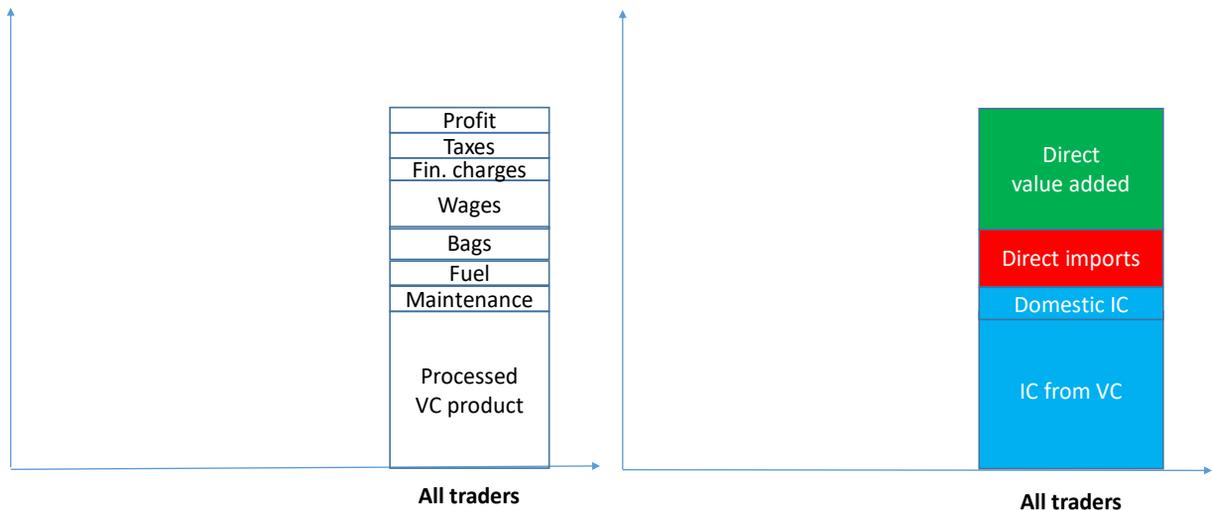


CONSOLIDATION OF VC ACCOUNTS

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What is the contribution of the value chain to economic growth?
 What is the contribution of the value chain to the GDP?

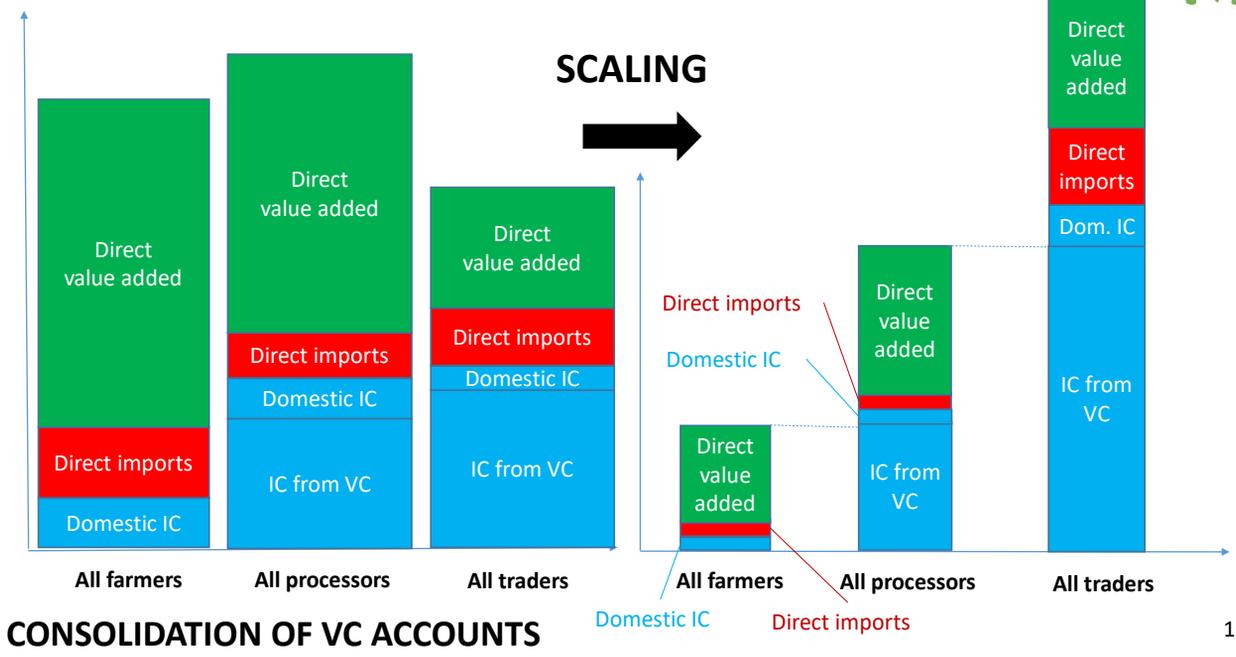


CONSOLIDATION OF VC ACCOUNTS

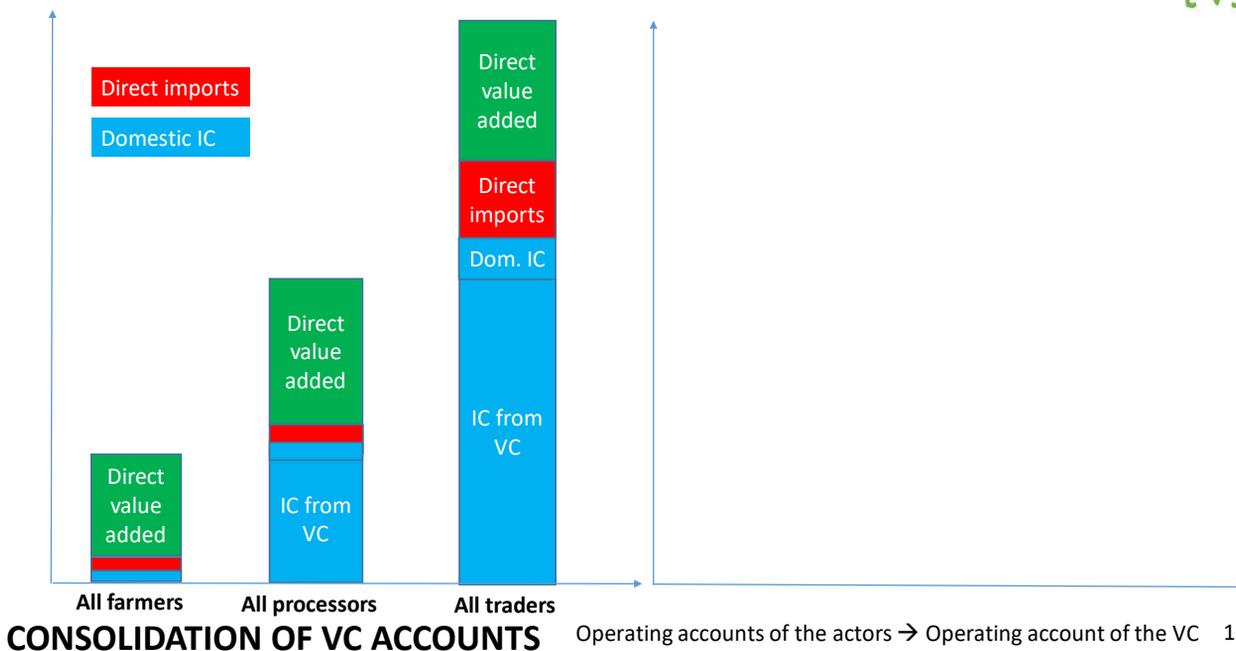
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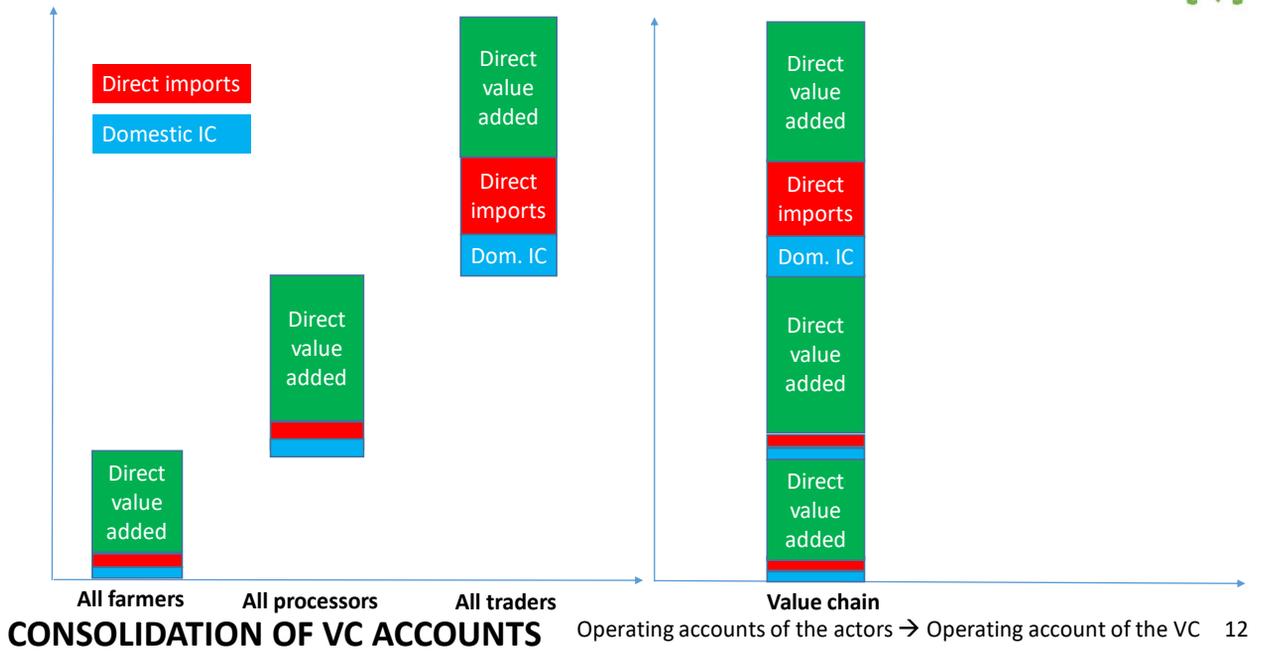
What is the contribution of the value chain to economic growth?
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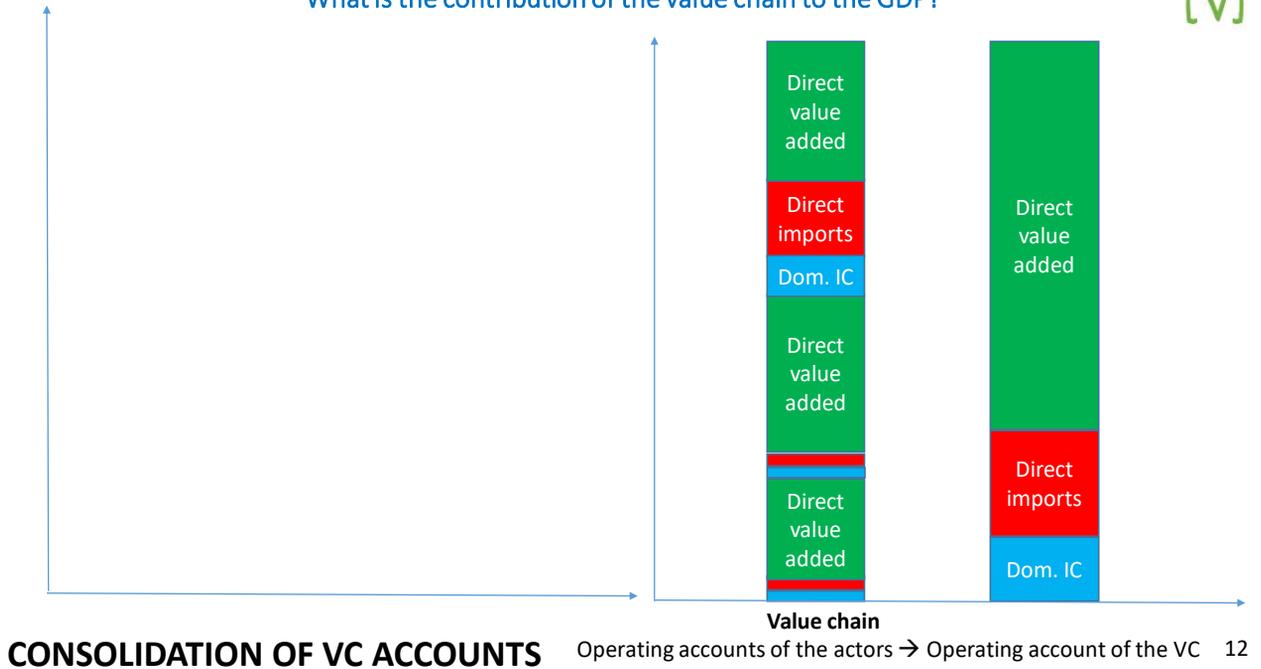
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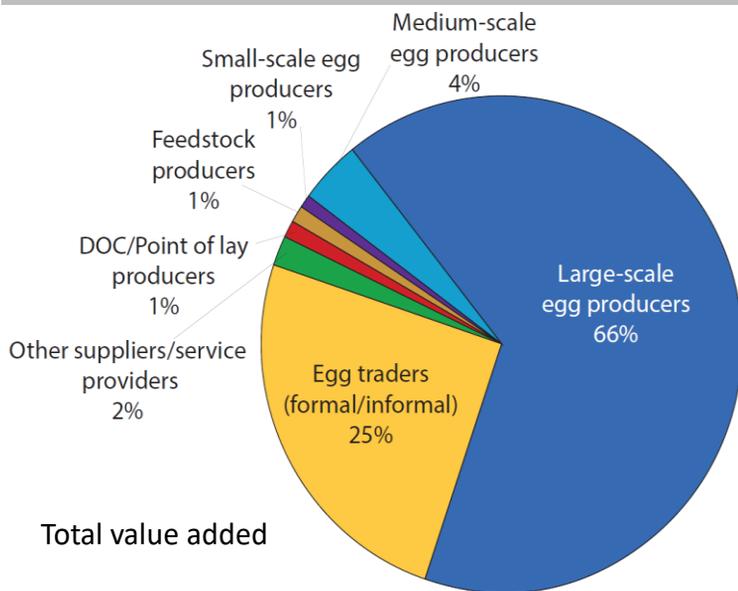
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Egg Zambia



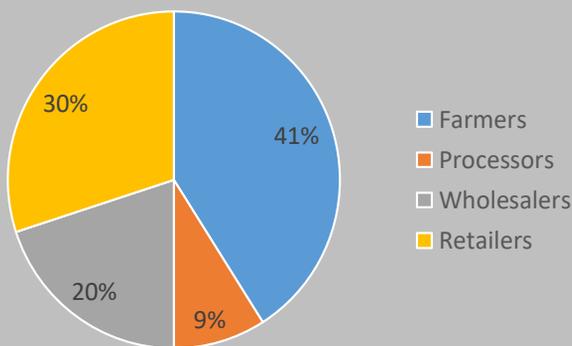
About 60% of the growth is generated by large-scale producers, while medium and small-scale producers contribute about 9.6%. The contribution by traders is estimated at 14.4% and that of maize and soya producers in the form of feed for the birds, amounts to 6.6%. Buoyant growth in the egg VC also means increased capacity to drive growth in the grains subsectors as it absorbs about 38% of the soya produced in Zambia.



Cassava Ivory Coast



Direct value added



Processors create less than 10% of the direct VA. Industrial units could become increasingly important in the coming years if public and private investment plans materialise. In particular, they could influence prices paid to producers, and compete with semi-industrial units, already in a rather fragile situation, on secondary urban markets, major national markets, and other African countries. Traders, wholesalers and retailers, generate almost 50% of the direct value added, and close to 60% in urban circuits thanks to higher selling prices.

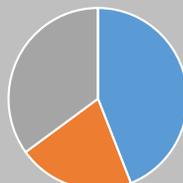
Sweet cassava



Attikié



Export

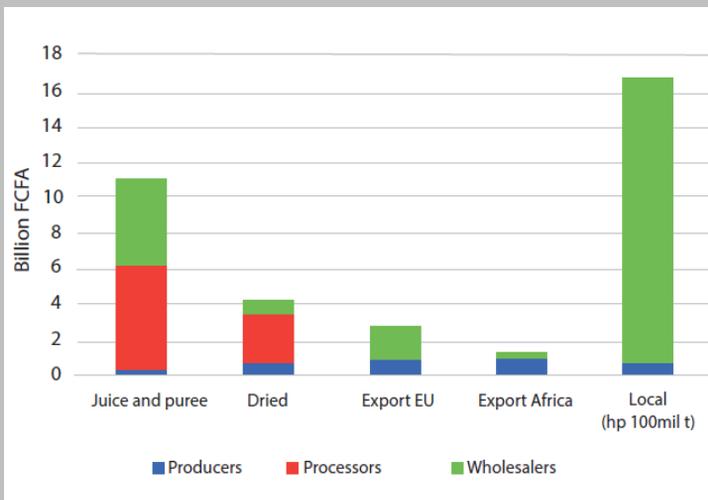




Mango Burkina Faso

The juice and puree sub-chain creates a significant part of the VA thanks to its volume and high retail prices.

The difference between the sub-chains in terms of the distribution of VA is explained by the number of intermediaries, by the price paid to producers (which varies from 10 FCFA for the local consumption sub-chain to 100 FCFA for the export quality mangoes destined for the EU), by the processing or not of the fruit. This distribution appears globally fair for producers in the export sub-chains: the dried mango and the fresh mango exported to Europe or to other African countries.



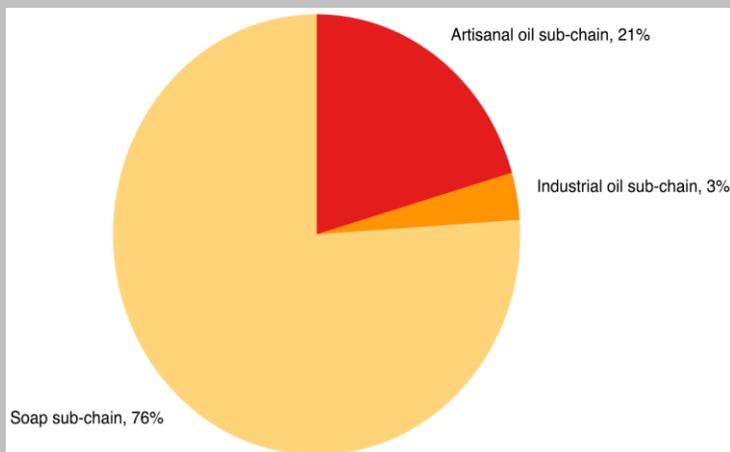
Distribution of the VA for each sub chain – Mango Burkina Faso



Palm Oil Sierra Leone

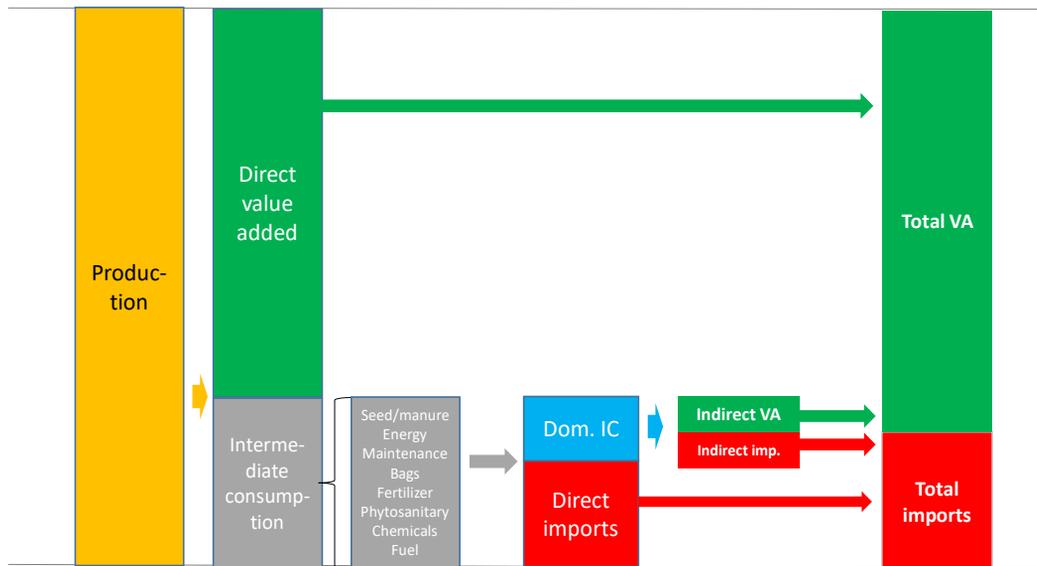
The palm oil VC contributes significantly to the economy of Sierra Leone. The direct VA is estimated at 354 million USD in 2017. Soap and oil respectively represent 76% and 24% of the direct VA.

The soap sub-chain is dominated by Guinean entrepreneurs who sell to their sister-companies in Conakry. It is thus estimated that on top of the 270 million USD of direct VA created by soap in Sierra Leone, another 60 to 70 million USD may be realised outside Sierra Leone (mainly in Guinea) by soap resales.



Contribution of the sub-chains to the VA of palm oil chain in Sierra Leone, 2017

What is the contribution of the value chain to economic growth?
 What is the contribution of the value chain to the GDP?



Total effects (directs + indirects)

COMPUTING GROWTH GENERATION: backward linkages computation

Cassava Burkina Faso

The direct value added of the cassava value chain amounts to 514 billion CFA, 56% of which is generated in the processed products sub-chain, 37% in the fresh sub-chain and 7% in the export sub-chain.

Activities along the value chain generate indirect value added in the national economy of 83 billion CFA (grinding services, manual pressing, guarding, transport, purchases of energy, packaging, etc.).

Egg Zambia

In 2015, the direct value added in the egg VC was €96.1 million and the indirect contribution from suppliers was €13.6 million.

The total value added represents around 1.4 times the total contribution of fisheries and aquaculture.

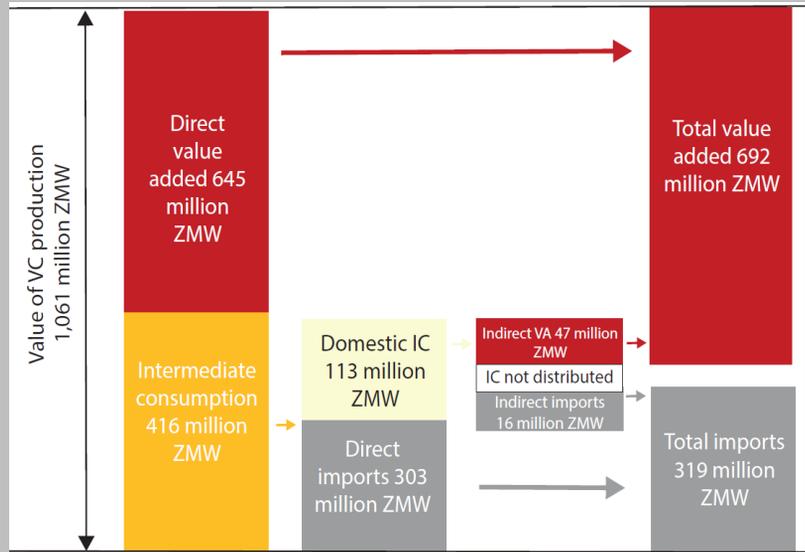


Aquaculture Zambia

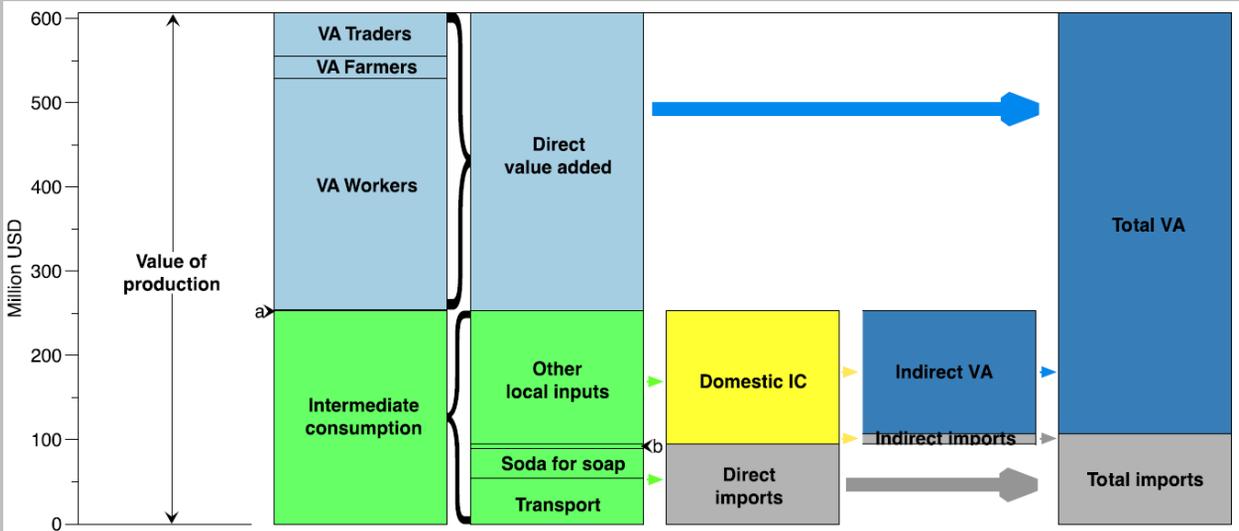


Total VA and total imports in the VC

(proportions not strictly respected for better readability)



Palm Oil Sierra Leone



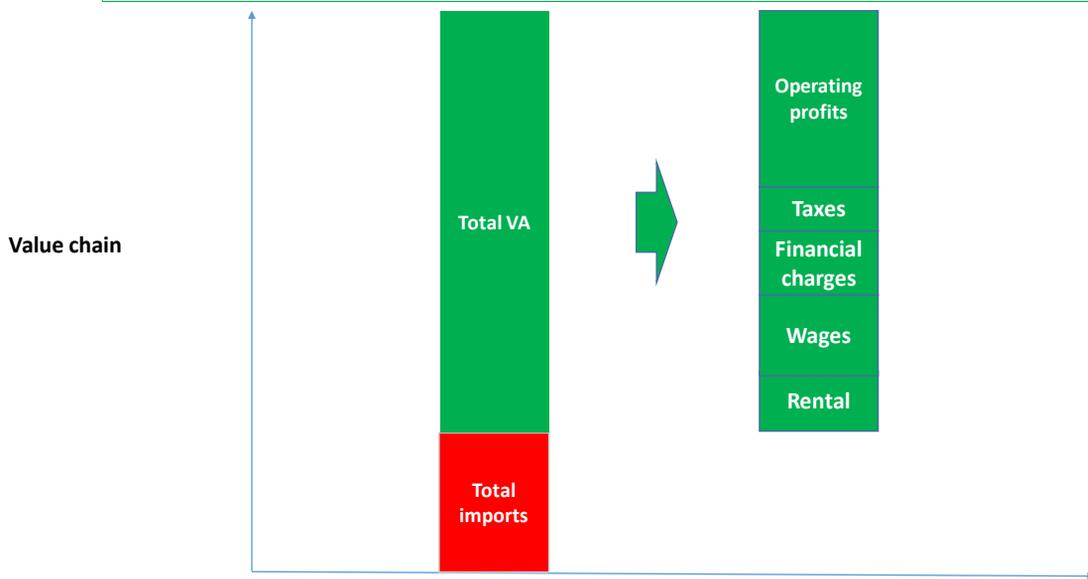
Total VA and total imports in the VC

What is the contribution of the value chain to economic growth?

What is the contribution of the value chain to the GDP?



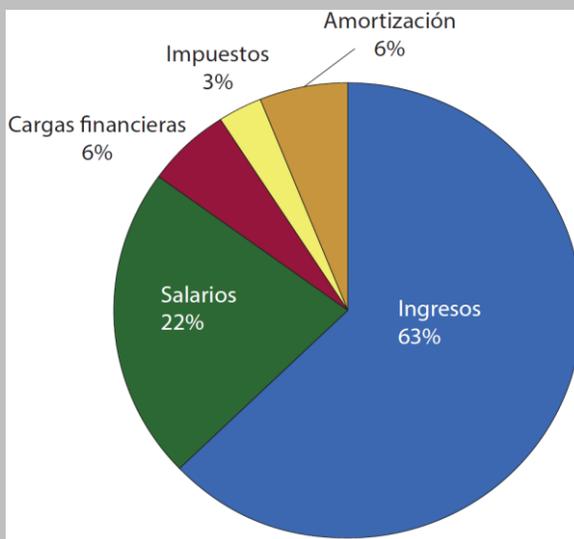
Total value added and components (wages, operating profits, taxes, financial charges, rental)



20

Café Honduras

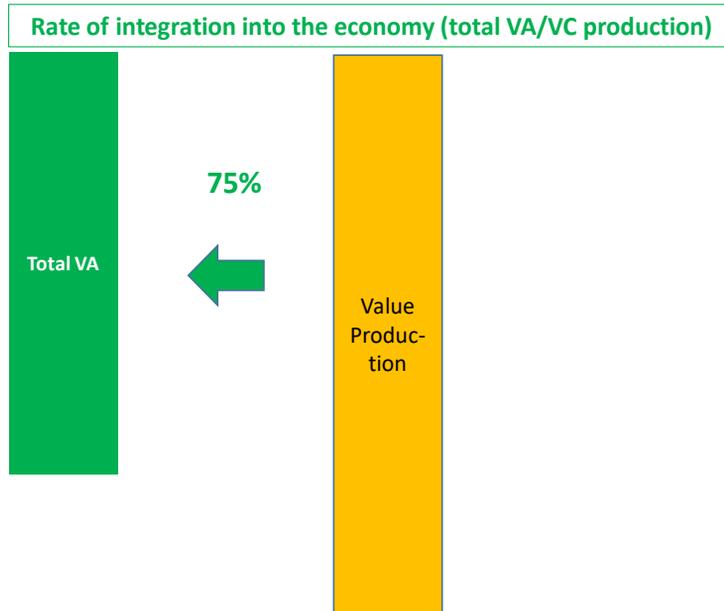
La cadena de valor llega a un valor agregado total (directo e indirecto) de 19,237 millones de HNL (685 millones €) en 2017, 65% producido por la cadena convencional y 35% por la cadena certificada. Unos 85% de este valor son ingresos para los actores de la cadena y salarios



Distribución del valor agregado total de la cadena a nivel nacional

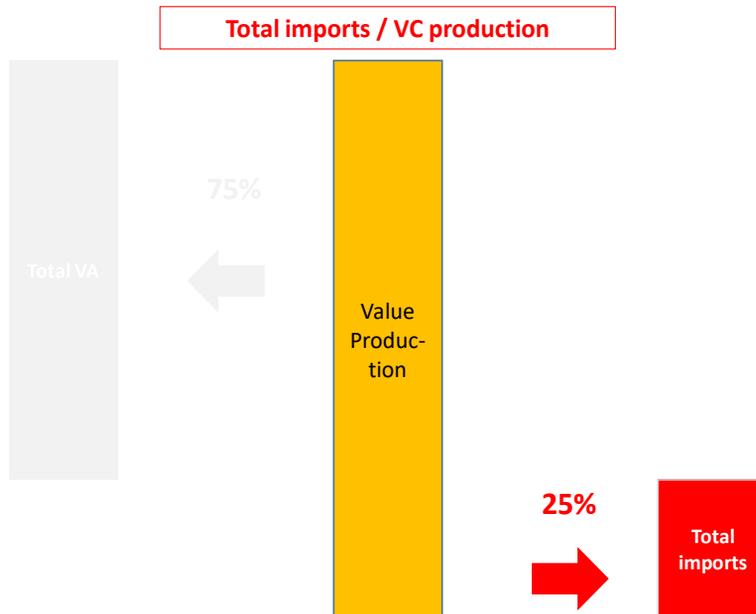
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What is the contribution of the value chain to economic growth?
 What is the contribution of the value chain to the GDP?



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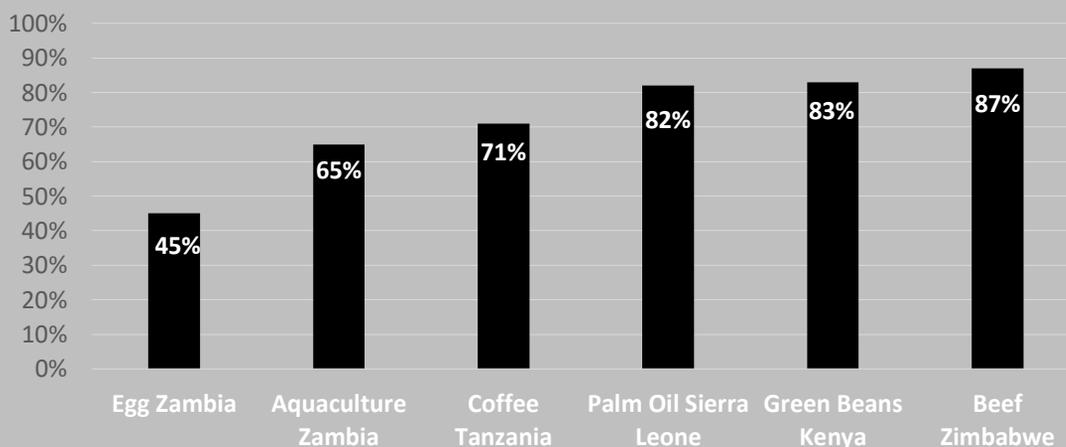
What is the contribution of the value chain to economic growth?
 What is the contribution of the value chain to the balance of trade?



22



Rate of integration into the economy (total VA/VC production)



23

Green beans Kenya

The rate of integration for the VC is 83%, demonstrating a good linkage with the national economic activities and strong development potential.

Rate of integration into the economy (total VA/VC production)



Aquaculture Zambia

The rate of integration into the national economy amounts to 65%.

This rate has improved in the past years, as Zambia has developed its own feed production industry. Nevertheless, this could be further improved with the development of the aquaculture sector through a possible limitation of the rising fish/tilapia imports that are currently needed by traders to satisfy consumers' demands.

Palm Oil Sierra Leone

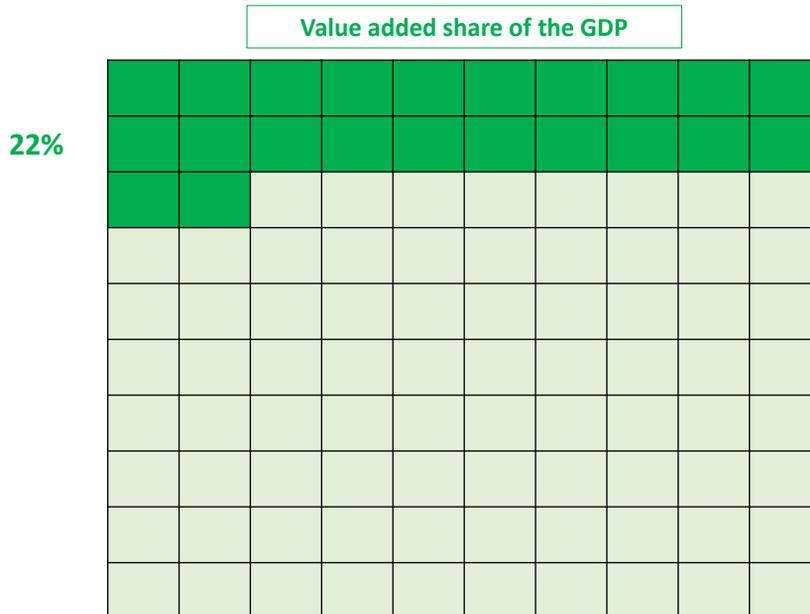
The total VA represents around 500 million USD i.e. 82% of the value of the production (of 608 million USD) %, and total imports represent 18%.

This rate of integration is rather high, in this case expressing a feature of an artisanal economy. This is typical of an extremely artisanal chain that provides incomes to poor actors, but cannot yet contribute significantly to economic growth without important changes in the infrastructure and services sectors.

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What is the contribution of the value chain to economic growth?

What is the contribution of the value chain to the GDP?



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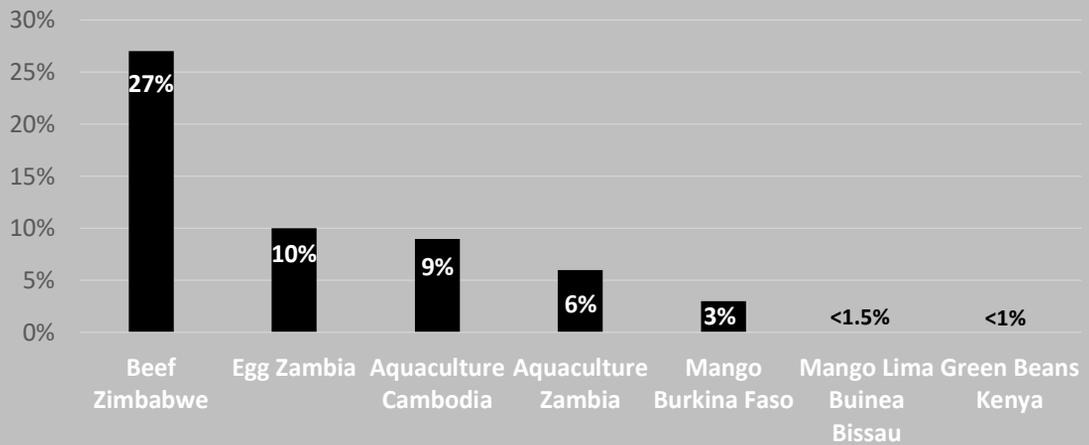
Core question 1.3:

What is the contribution of the value chain
to the agriculture sector GDP?

26



Value added share of the agricultural sector GDP



29

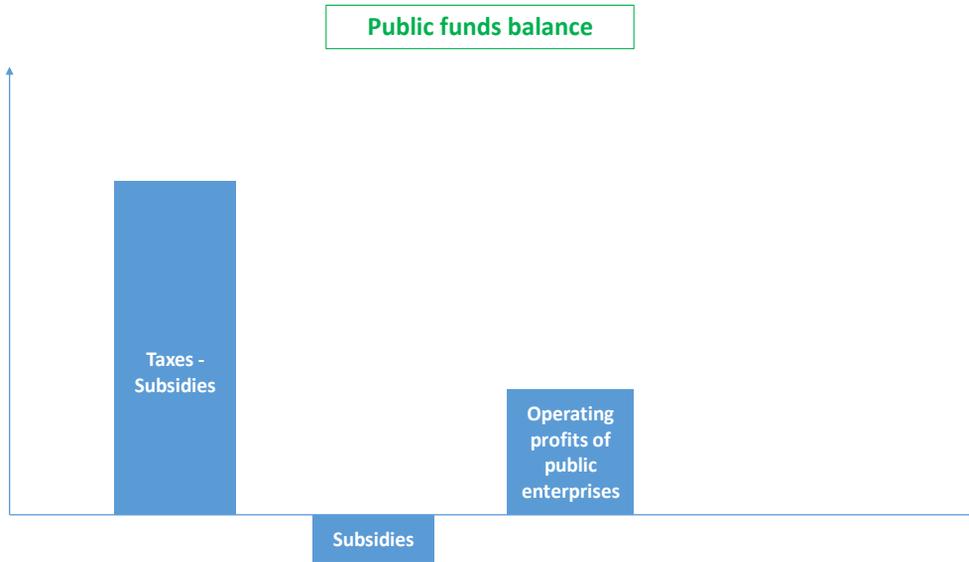


Core question 1.4:

What is the contribution of the value chain to the public finances?

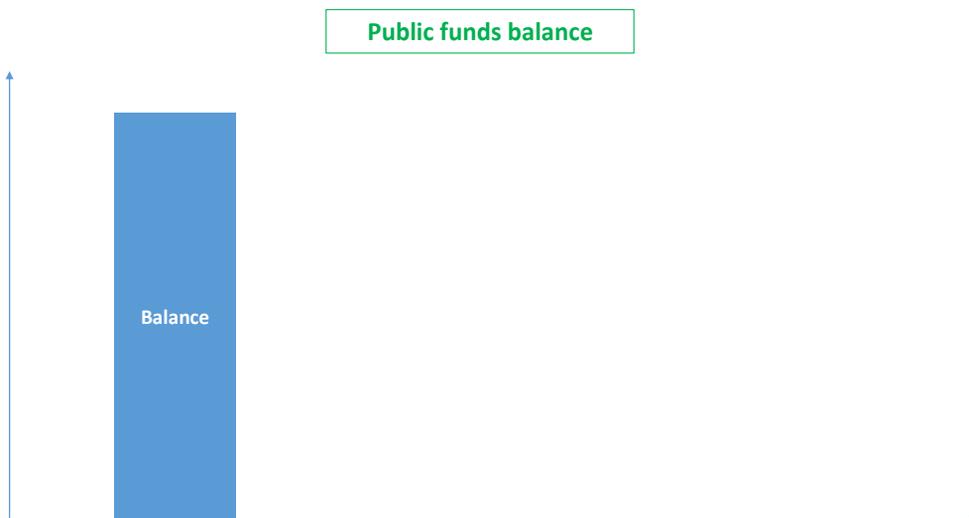
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What is the contribution of the value chain to economic growth?
 What is the contribution of the value chain to the public finances?



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What is the contribution of the value chain to economic growth?
 What is the contribution of the value chain to the public finances?



31

Egg Zambia

The VC contributes an estimated €7.2 million to public finances. This figure breaks down as follows: 50% from corporate tax at a rate of 10%; 35% from VAT on egg sales through formal channels (mainly supermarkets) but also unclaimed VAT refund which can be claimed by small and medium-scale producers as VAT on inputs such as feed and veterinary products is refundable although most producers are unaware and do not claim it. The remaining 15% is the contribution in the form of Council Levies paid to the local government authorities.



Cassava Ivory Coast

The contribution to public finances is low for this product which is still very manual and artisanal. Besides, direct taxes on herbicides, energy, imported material and the market fees do not exceed 13 billion CFA, or 0.2% of the state budget.

Aquaculture Zambia

The Government of Zambia does not provide direct subsidies to companies in the VC, but the sector has benefited from several aquaculture support projects involving international and national public funds. The total taxes paid to the Zambian state by the actors in the VC are estimated at 6.8 million € (corporate taxes, import duties and indirect taxes).

Aquaculture Cambodia

The contribution of the VC to the public funds balance is limited to 0.69% of the national budget, however the contribution to the budget of the Ministry of Agriculture is 42.6%. There is contribution from taxes, quotas licenses for licensed imports of fish, feed and seed. At the same time, the Government presently misses out duties on a large volume of unreported / unlicensed imports of both fish and feeds.

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Core question 1.5:

What is the contribution of the balance of trade?

33

What is the contribution of the value chain to economic growth?
 What is the contribution of the value chain to the balance of trade?



VC balance of trade



34

What is the contribution of the value chain to economic growth?
 What is the contribution of the value chain to the balance of trade?



VC balance of trade



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Cassava Ivory Coast

The cassava crop presents a weak positive trade balance of around 4 billion CFA. The share of exports could however increase in the coming years due to the international reputation of processed cassava products (attiéké & placali).



Café Honduras

Las exportaciones de café han generado en los últimos años entre USD 850 y 1,100 millones, variando según el volumen de la producción y los precios en el mercado internacional, lo que representa 20-25% de las divisas del país. El crecimiento en valor es debido al aumento de la calidad y de las ventas de café diferenciado. La generación neta de divisas se reduce a un 13-16% cuando se incluye el valor de las importaciones de agroquímicos, insumos y equipos.

Egg Zambia

The foreign exchange generated from the export of table eggs was about €18.2 million in 2015. With the total value of imported intermediate goods used in the chain estimated at €14.8 million, the chain generated net foreign exchange of €3.4 million during that year. The gross foreign exchange generated is higher than earnings from more “visible” industries such as cut flowers and fresh fruits/vegetables. It is also likely to increase in the near term as many of the large-scale producers are located close to the main regional export markets.

Aquaculture Cambodia

The VC balance of trade is negative (-132 million €), due to both the high level of imports of farmed fish (67 million €), and inputs (65 million €), and the low level of exports of farmed fish.

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Core question 1.6:

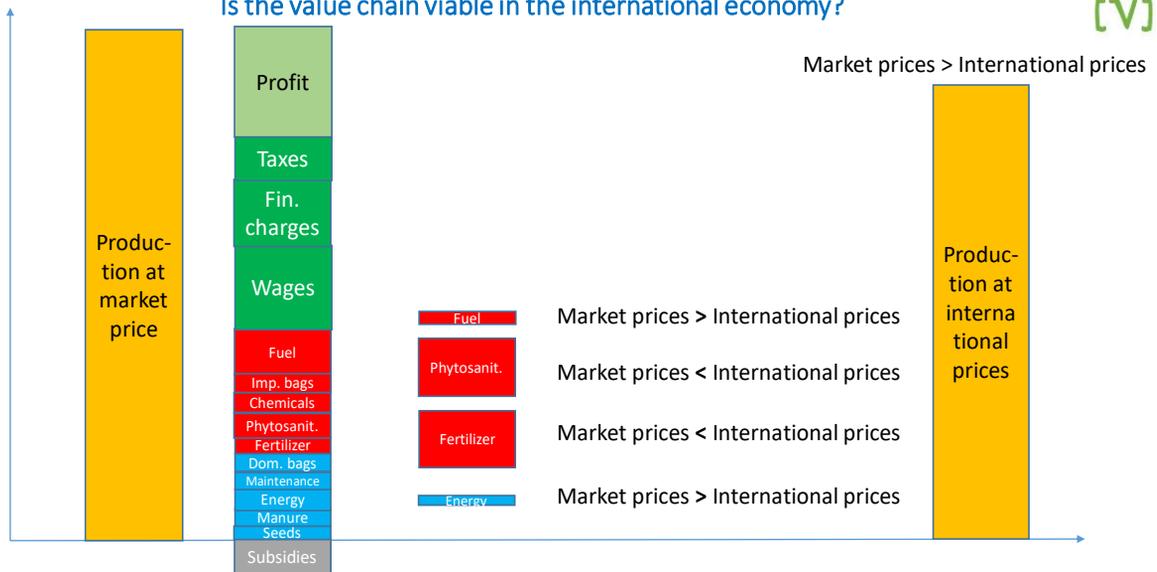
Is the value chain viable in the international economy?

37



What is the contribution of the value chain to economic growth?

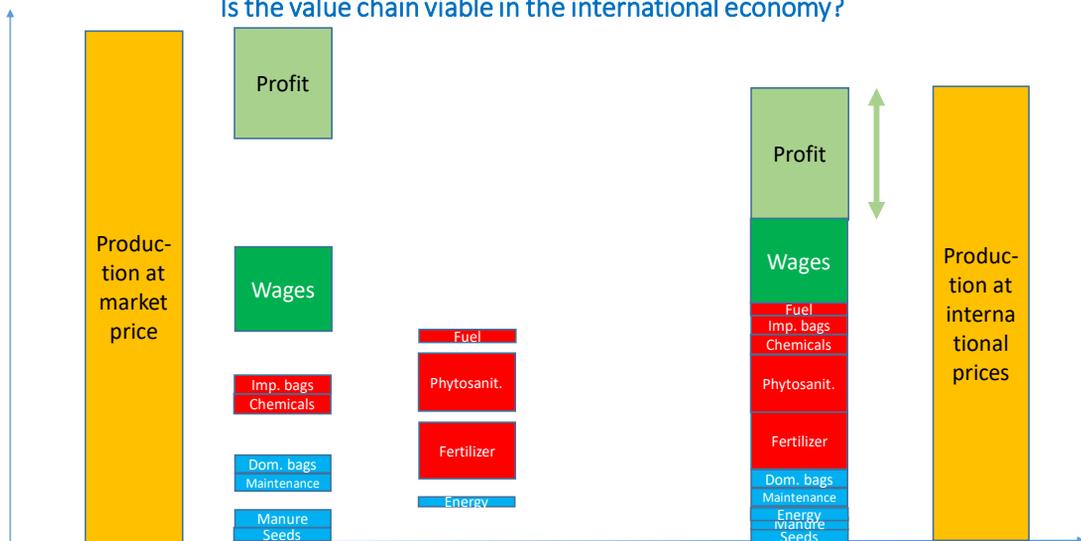
Is the value chain viable in the international economy?



Eliminating transfers (subsidies, financial flows, taxes)
Valuing tradeables goods and services at international parity prices

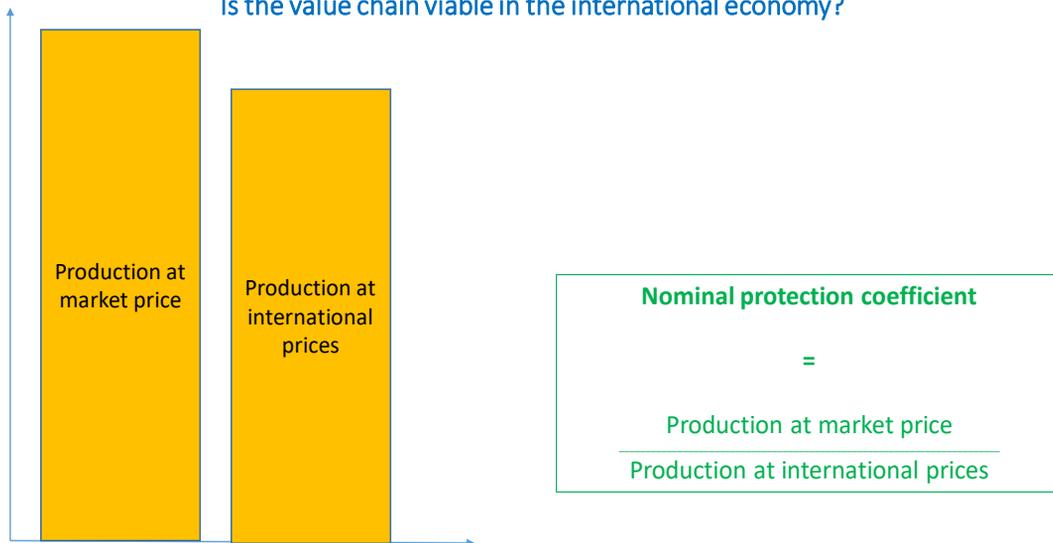
What is the contribution of the value chain to economic growth?

Is the value chain viable in the international economy?



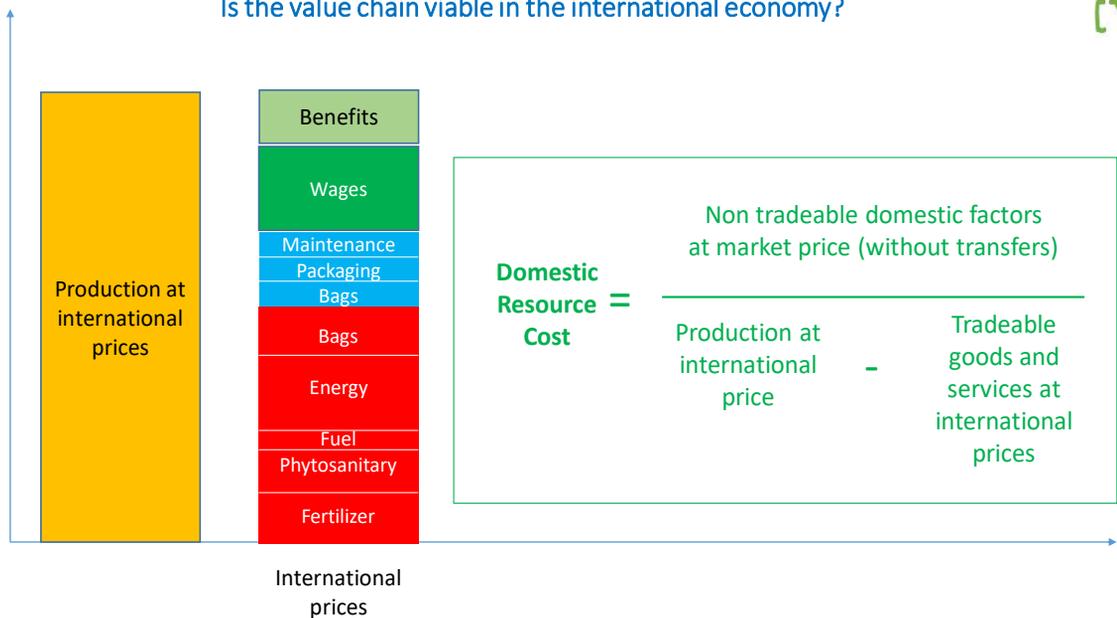
Eliminating transfers (subsidies, financial flows, taxes)
Valuing tradeables goods and services at international parity prices

What is the contribution of the value chain to economic growth?
Is the value chain viable in the international economy?



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What is the contribution of the value chain to economic growth?
Is the value chain viable in the international economy?



40

Aquaculture Zambia

Despite sufficiently high margins generated at the production level, prices in the chain (from 1.28 to 2.72 € per kg for fresh fish) make farmed fish less competitive compared to imported farmed fish (0.9 €/kg). This is measured through the Nominal Protection Coefficient (NPC = 1.9). Domestic Resource Cost Ratio (DRC = 1.2) greater than 1 also indicates a poor remuneration of domestic factors, thus a non-competitive VC into the international economy.

Aquaculture Cambodia

The prices of imported farmed fish are consistently lower than domestic market prices. However average international prices in the region are higher. The Nominal Protection Coefficient, when calculated with the prices of farmed fish (same species) as it enters Cambodia is therefore higher than 1, while it is below 1 when calculated with the international prices. This corroborates the fact that farmed fish imported into Cambodia is of inferior quality and a 'by-product' of its neighbouring countries.

Beef Zimbabwe

A Domestic Resource Cost ratio (0.15) <1 shows that the value created by the VC, when measured in international prices, is greater than the domestic resources used in the VC. This indicates a competitive advantage.



Nominal Protection Coefficient

Domestic Resource Cost

41



Framing question 2:

IS THIS ECONOMIC GROWTH INCLUSIVE?

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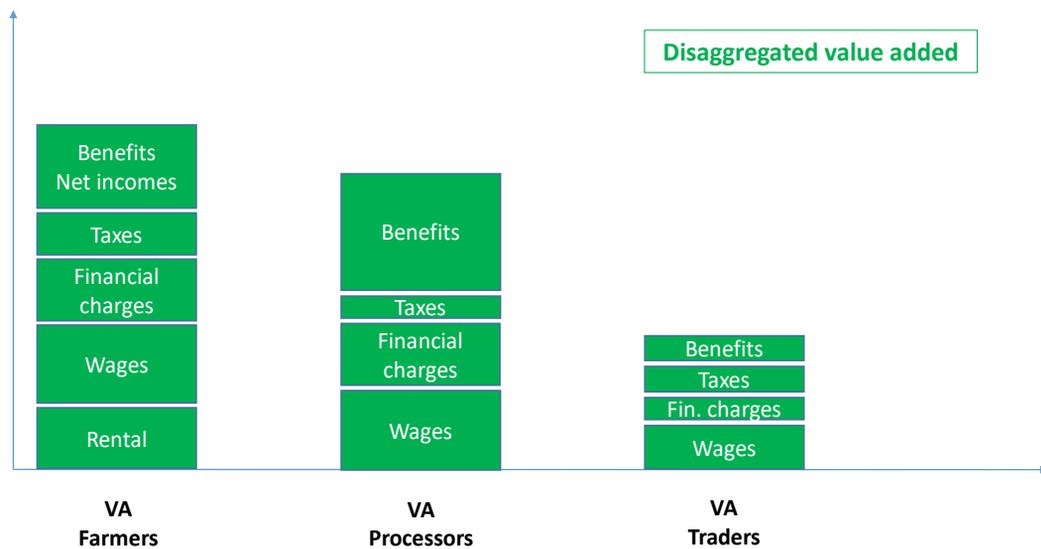
Core question 2.1:

How is income distributed across actors of the VC?

43

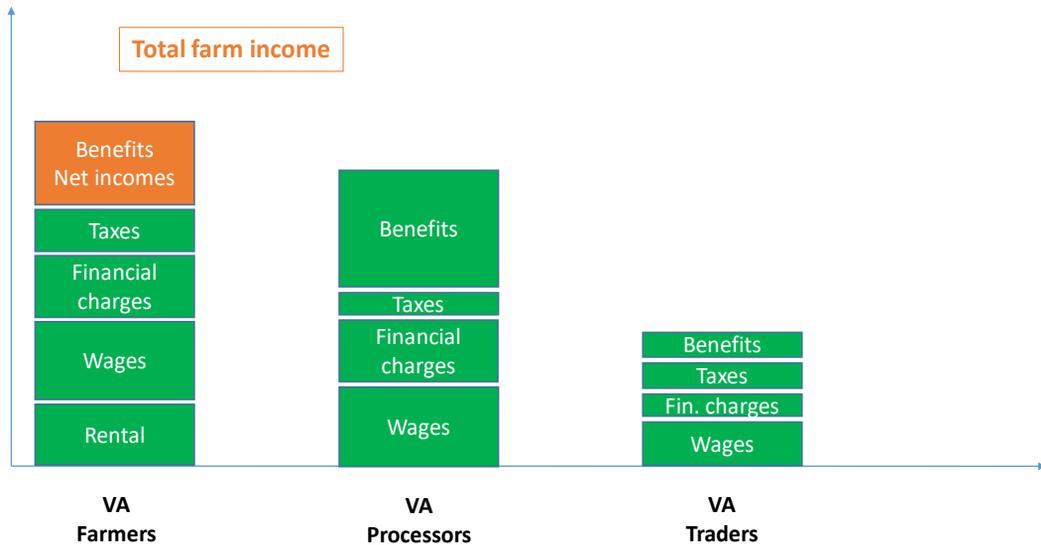
Is this economic growth inclusive?

How is income distributed across actors value chain?



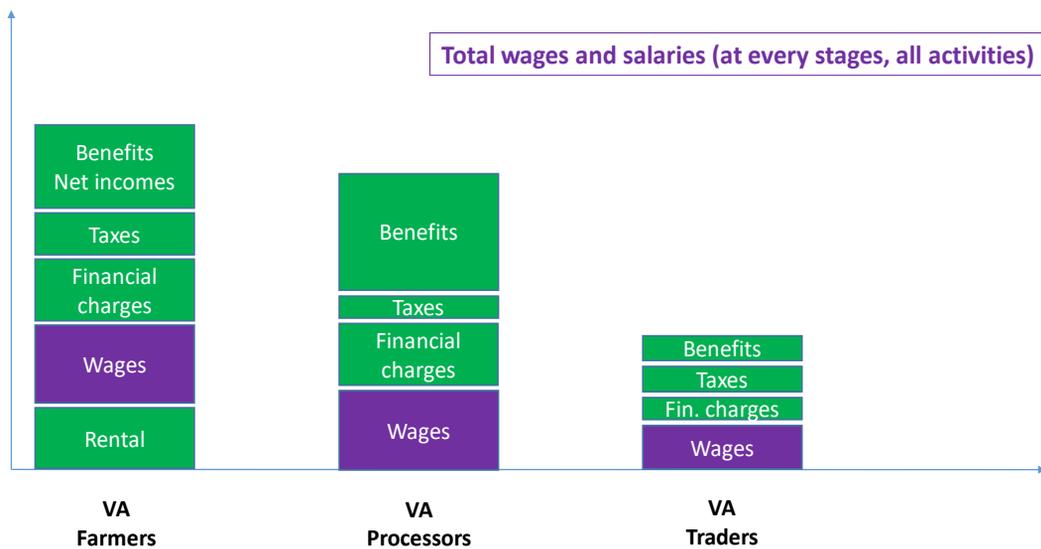
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Is this economic growth inclusive?
How is income distributed across actors value chain?



45

Is this economic growth inclusive?
How is income distributed across actors value chain?



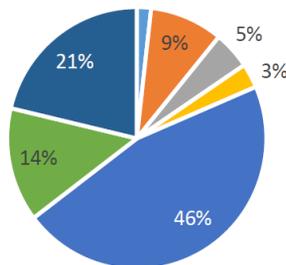
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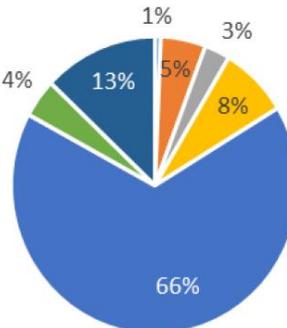
Aquaculture Zambia

Large farmers contribute consistently to jobs creation, they share 49% of the net operating surplus and 84% of the wages. In contrast, the contribution of traders to employment is limited. They share 35% of the net operating surplus and 4% of the wages.

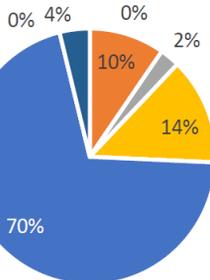
Net operating surplus 2%



Direct value added



Wages



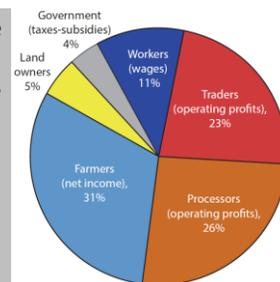
- Semi-subsistence pond farmers
- Small commercial pond farmers
- Medium pond farmers
- Large pond farmers
- Large cage farmers
- City ladies
- Large wholesalers



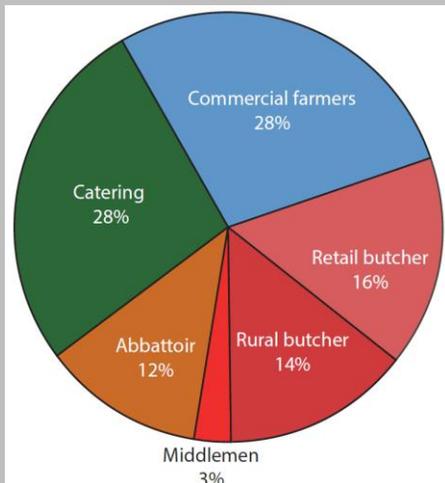
Beef Zimbabwe



Income distribution to VC actors



Wages (Workers)



Wages distribution at various stages of the VC

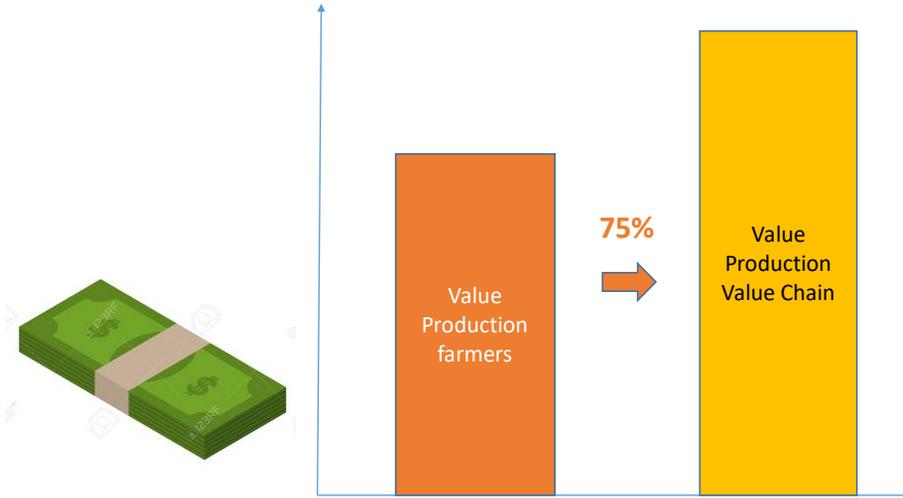
Wages and farmers' incomes account for 42% of the net income of the whole VC. This suggests a medium level of inclusiveness. Farmers retain 31% of the income created within the VC representing a high return on family labour across the different farming models.

The wages are relatively small in the VC (11%) showing that the structure of the farming systems have normalised around family, rather than external labour models. However, wages are significant at the level of commercial farms (28%) and catering establishments that include fast food chains, small restaurants and food outlets (also 28%) because the VC is important for the domestic consumption.



Is this economic growth inclusive?
How is income distributed across actors value chain?

Share (%) final price at farm gate

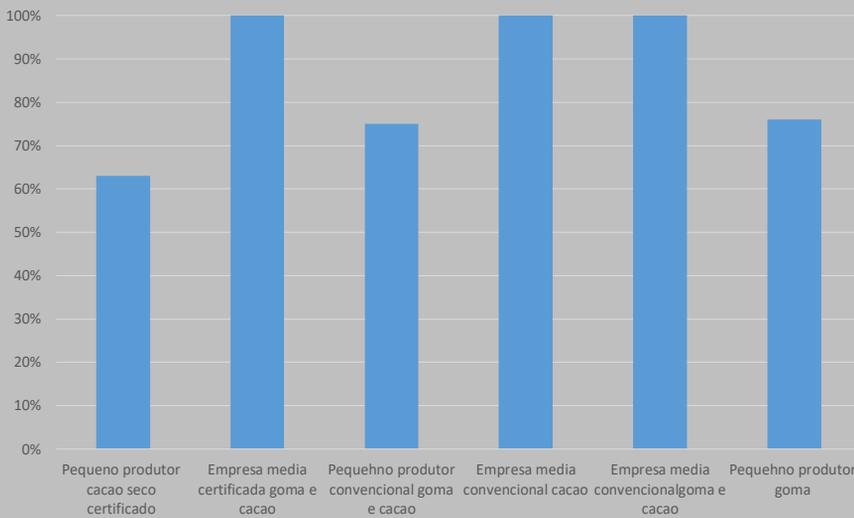


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Cocoa Sao Tome



% do preço final no portão da fazenda

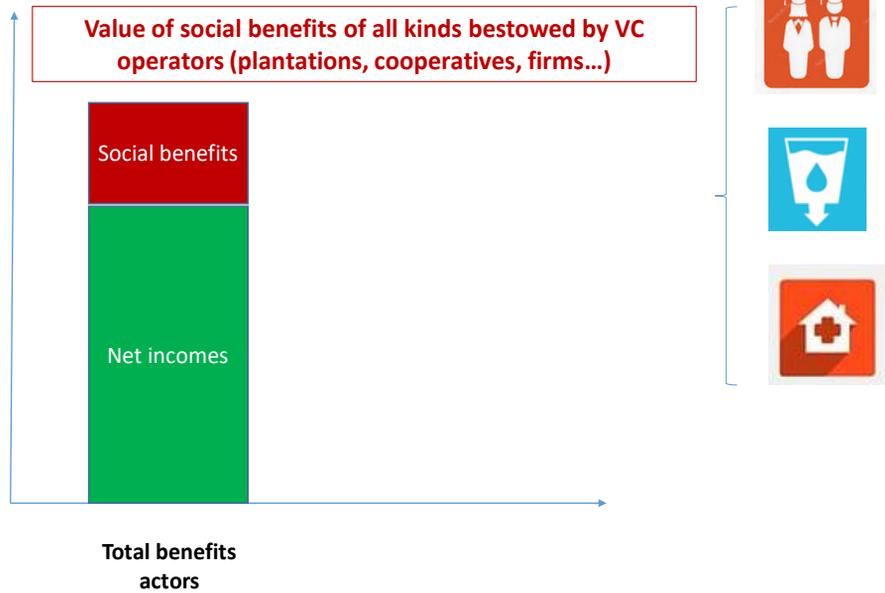


Cocoa Papua New Guinea

The very favourable distribution of cocoa revenues to smallholders is evidenced by a very high ratio - around 80% - between the delivered-in-store (DIS) purchase price to national producers and the Free-on-board (FOB) selling price in the international market.

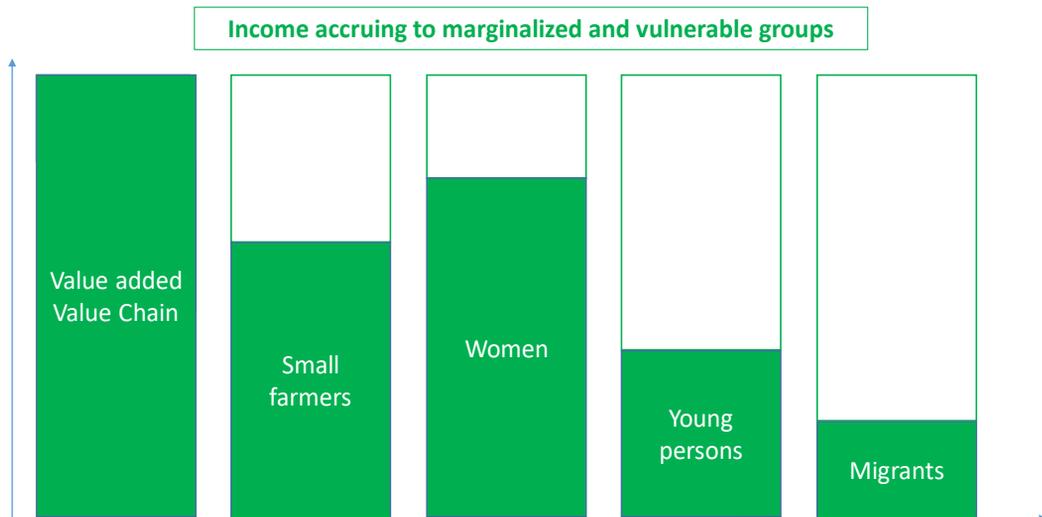
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Framing question: Is this economic growth inclusive?
Core question: How is income distributed across actors value chain?



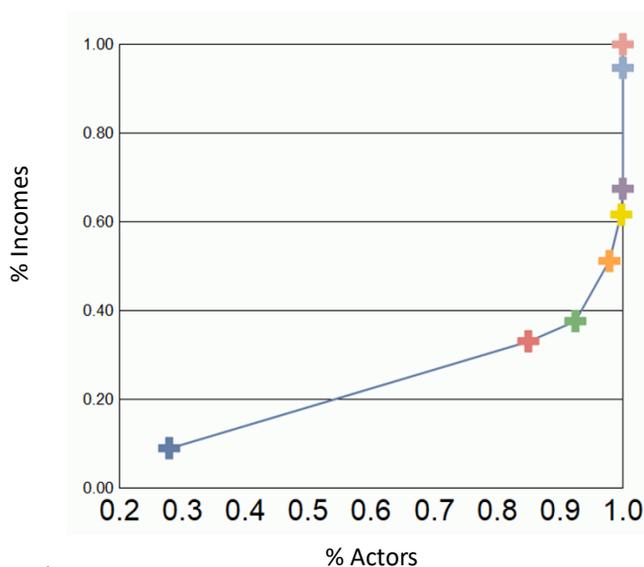
51

Is this economic growth inclusive?
How is income distributed across actors value chain?



52

Is this economic growth inclusive?
How is income distributed across actors value chain?



Income Gini Index

0.6212

0: Fair distribution

1: Totally inegalitarian

Incomes distribution

53

Beef Swaziland



The country has a long-standing income inequality even if the Gini index declined at a moderating rate to shrink from 0.61 index in 1994 to 0.52 in 2009 (World Bank, 2017). In a recent document provided by the Ministry of Agriculture, it was stated that the richest 19 percent of the population controls 56 percent of total income, while the poorest 19 percent controls only 4.3 percent (MOA, 2016).

Despite its valuable contribution to the GDP, the beef value chain does not escape to the overall country's situation characterized by a pronounced uneven income distribution. The tabulated Gini index for the Beef value chain is largely higher than 0.50 reaching 0.80 during the VCA4D investigation period.

Thus, poor households in livestock usually must seek alternative income sources and have low per capita incomes. One aspect of diversification, the presence of salaried income, has an especially dramatic effect on total income, but is an advantage enjoyed by relatively few households

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Core question 2.2:

What is the impact of the governance systems on income distribution?

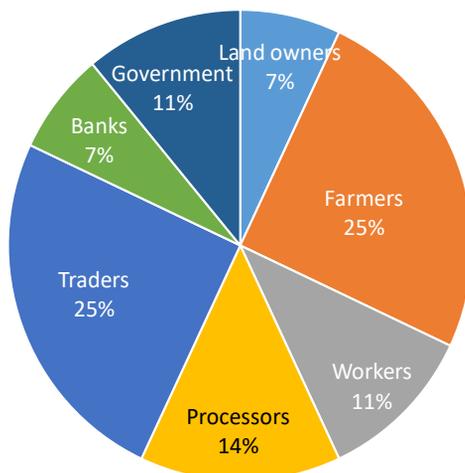
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Is this economic growth inclusive?

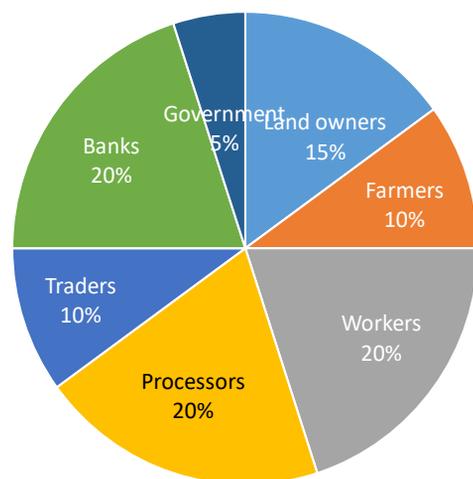
What is the impact of the governance systems on income distribution?



Income distribution



Sub-chain A / with contract



Sub-chain B / without contract

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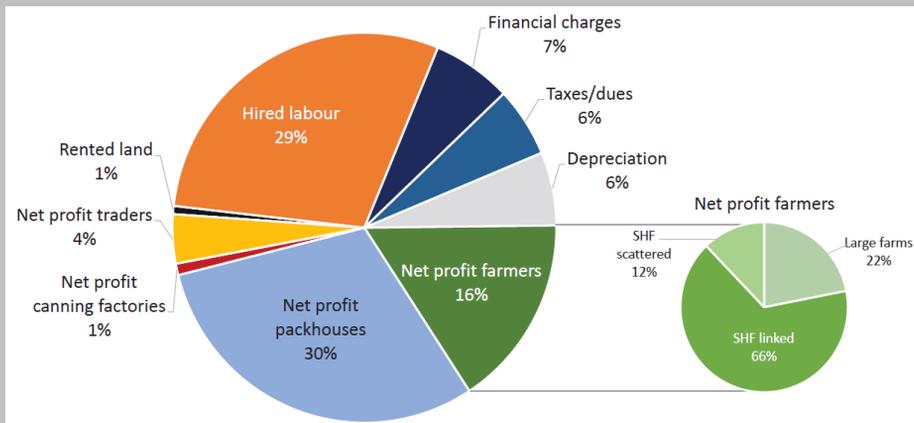


Green Beans Kenya



The two main parts of the VA are: (i) the net profit of packhouses and (ii) the wages to hired labour both in packhouses and farms.

Even smallholder farmers employ hired workers for labour intensive activities, such as harvesting. It is large-scale producers and SHF with links to exporters that generate the highest value addition in the agricultural part of the VC.



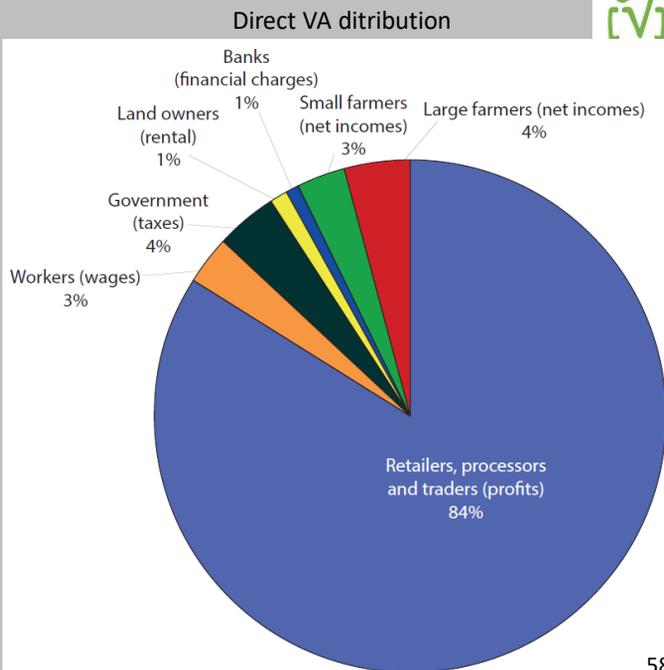
VA distribution

Aquaculture Cambodia



Almost 92% of the direct VA is composed of profits for the actors of the VC (farmers, traders, processors, retailers), but only 7% goes to farmers and 3% to small farmers

Nevertheless, the majority of the semi-intensive low input producers have a portfolio of livelihood activities (mainly in agriculture), and fish farming still provides an important contribution to their food security. This is the same for the extensive and rice/fish farmers.

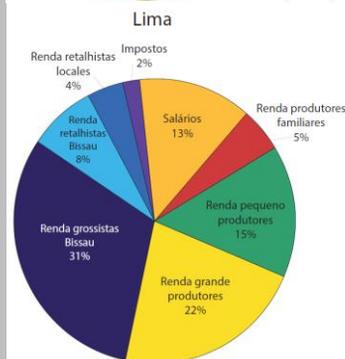
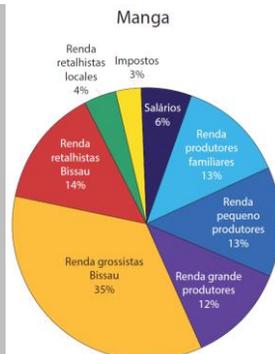


Guiné-Bissau

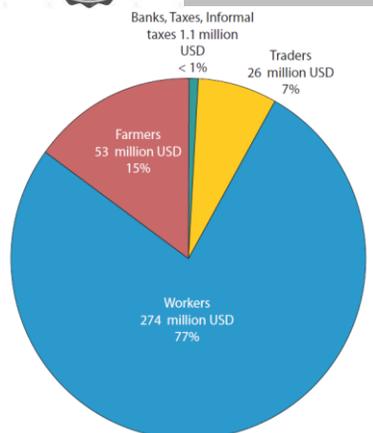
O valor acrescentado está sobretudo concentrado nos intermediários que actuam em Bissau, o principal mercado, sendo a participação salarial muito baixa.

O impacte de ambas as fileiras no emprego é muito baixo, sendo a maioria dos salários associados à produção pagos em géneros alimentares ou outros bens.

As duas cadeias de valor possuem semelhanças em termos económicos. Ambas são financeiramente rentáveis. Apresentam um elevado valor acrescentado que, no essencial, é favorável aos produtores e retalhistas, sendo pouco favorável para os assalariados. Tem um peso muito baixo ao nível da economia, dada a reduzida participação no PIB, na balança comercial e na geração de emprego. A ineficiência de colecta de taxas ou impostos faz com que o Estado não retire dividendos destas fileiras.



Palm Oil Sierra Leone



The highest share of the profits goes to the farmers (15% of the direct VA), this crop being the main cash crop for many families. On average, a household of 6 people produces and auto-consumes 40 litres of PO per year, while producing and selling 160 litres of PO. Taking self-consumption into account, 53 million USD of PO (red oil and masanke) were generated as VA for the farmers in 2017.

Traders generated around 7% of the direct VA. The pivotal role of the local artisanal transformation is illustrated by the fact that workers' income amount to 77% of the direct VA. Less than 1% of the direct VA goes to other actors, such as banks and other services. Therefore, the VC provides basic income for a significant number of households in the rural sector and small towns.

Most of the traders and brokers do not pay taxes and many loans take the form of barter-trade. Traders use banking services as little as possible, given the high interest rates and inflation. Only the industrial sector pays formal taxes to the Government. In addition, it is quite probable that substantial "informal taxes" are part of actual production costs.

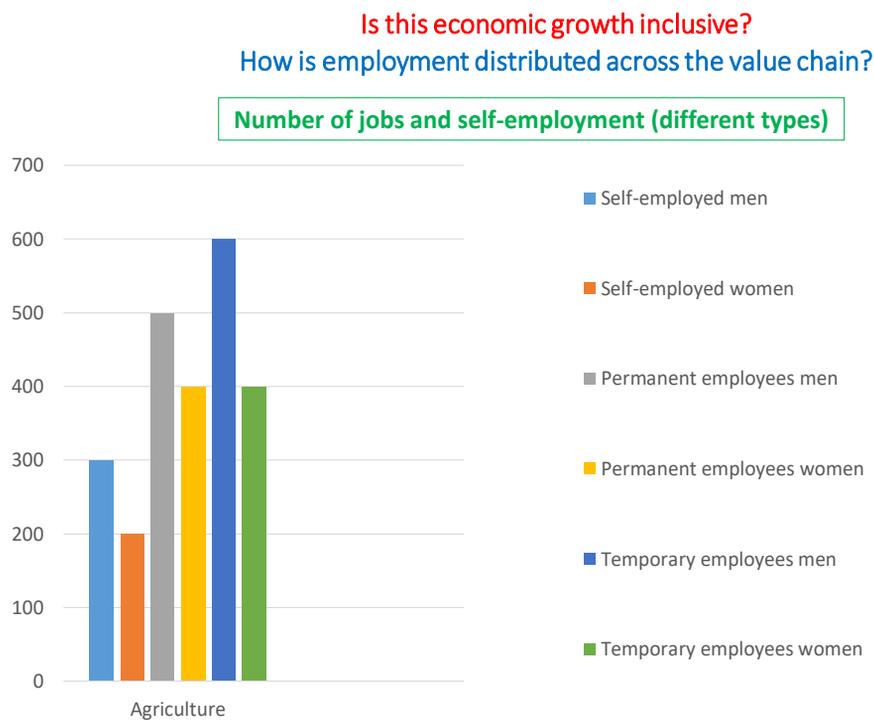
As the industrial actors are still in investment phase, they still do not currently create significant direct VA and are not yet profitable; soap manufactures sell at cost in Sierra Leone, making profits in Guinea, to escape the devaluation of the local currency.



Core question 2.3:

How is employment distributed across the value chain?

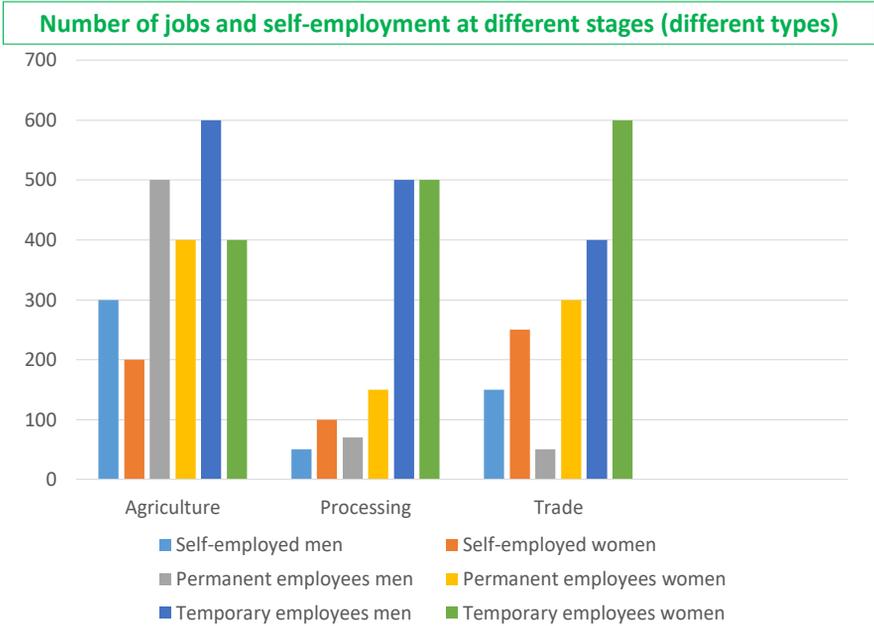
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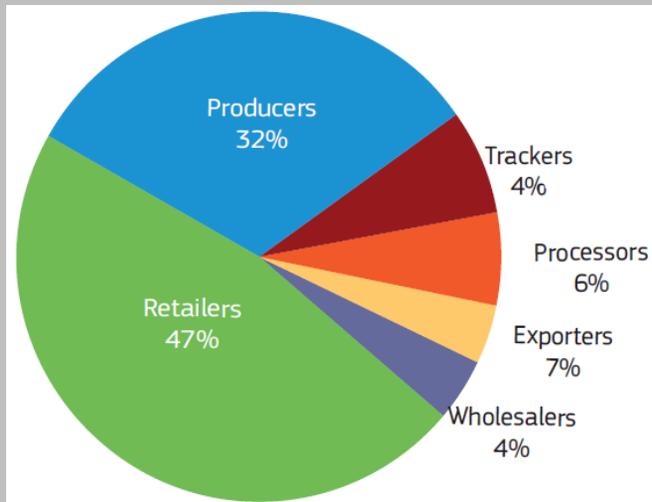
Is this economic growth inclusive?
How is employment distributed across the value chain?



Mango Burkina

The VC is a provider of employment. Its activities employ around 28,000 people: 21,000 as entrepreneurs or similar (farmers, trackers, retailers, etc.), about 350 in permanent jobs in processing and packaging for export of fresh mango, and 6-7,000 in seasonal jobs throughout the chain.

The seasonal marketing of fresh mango in the local market also supports nearly 10,000 retailers. The total salaries across the chain amount to FCFA 1.2 billion.



Distribution of direct employment: number of people working across the whole VC (part of the year)



The number of jobs generated directly by the VC represent more than 425,000 full-time positions. A large proportion of these jobs are found in the retail trade, agricultural production and artisanal processing. The value chain, with 9 million workers in 2016, accounted for 4.7% of employment in the country.

Cassava-related activities are also becoming more and more attractive to the young including: production, jobs related to manufacturing of traditional processing tools (press, grater ...), local services for farming tasks and processing operations. There has been a deceleration in the departure of rural youth to the city, which can also be attributed to the attraction of cassava-related activities.

Cassava Ivory Coast



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Café Honduras

La cadena genera ingresos y empleos para unas 120 mil familias cafetaleras y 300 mil trabajadores rurales beneficiando a más de un millón de personas, en su mayoría minifundistas y pequeños productores.

Beef Zimbabwe

The number of jobs estimated in the VC is 110,000. The largest employing segments of the beef VC are caterers (34% of jobs), retail butchers (26%) and rural butchers (23%).

Aquaculture Cambodia

the VC generates 80,000 jobs (full-time equivalent). The majority of these jobs are self-employment or family labour (93% is self-employed), while a small proportion is hired labour. Men undertake most of the hired wage labour (63%), particularly for heavier tasks such as digging ponds, lifting, loading and transport. The majority of wage labour is year-round but some is seasonal.



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Coffee Papua Guinea



Employment is generally associated with full-time salaried jobs. If the positions offered by administrations and international projects are excluded, only export companies provide full-time salaried jobs for the majority of their staff. This wage employment has declined since the mid-2000s to around 300 people in 2017 - excluding workers employed in the remaining large-scale plantations.

All companies also rely on casual staff during periods of intense activity, who work from a few days to a few months a year under a formal contract. This type of part-time employment concerned around 200 people.

Most of the work done by the cocoa industry is in fact in the informal economy and involves 3 categories of workers. First of all, there are about 150 000 households who benefit directly from the exploitation, processing or sale of cocoa. However, these 150 000 smallholders do not rely solely on their labour force to conduct their activity and resort to two types of workers:

1. Local waged workers, especially during harvesting periods, and this cost exceeds PGK 21 million nationally. At 22 PGK per working day and 280 working days per year, this sum represents the equivalent of 3500 full-time jobs;
2. most of the production activities - between 75% and 90% - are carried out by members, friends and relatives of the household without payment. Self-employment would then be equivalent to 14 000 full-time jobs. It represents the most important production factor to grow cocoa in PNG.

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Core Questions (FQ1)	Minimum required Indicators	Data / Information
How profitable and sustainable are the activities for the entities involved ?	. Net Income by type of actor . Benchmark of farmers' Net Income with minimum wage and/or job opportunities	. Costs, revenues . Data for comparison
What is the contribution of the VC to the GDP ?	. Total Value Added and components . VA share of the GDP . Total VA/VC Production = Rate of Integration into the Economy	. Wages, Farm Net Incomes, Operating Profits, Taxes, Financial Charges . VC Production . GDP
What is the contribution of the VC to the agriculture sector GDP ?	. VA share of the Agriculture sector GDP	. Agricultural GDP
What is the contribution of the VC to the public finances ?	. Publics Funds Balance (Taxes - Subsidies...)	. Taxes, Subsidies, operating profits of public enterprises, . Receipts and outlays of the Government
What is the contribution of the VC to the balance of trade ?	. VC Balance of Trade . Total Imports/VC Production	. VC product imports . IC direct and indirect imports
Is the VC viable in the International Economy	. Nominal Protection Coefficient (NPC) . Domestic Resource Cost Ratio (DRC)	. Taxes , Subsidies . International prices of main CI . International prices of the VC product





Using the AFA software for economic analysis

The AFA software gives support to design, calculation and analysis:

- Framing Question 1:
 - Financial accounts by agent and/or by activity
 - The consolidated VC operating account
 - Total VA (created directly in the VC and indirectly through backwards linkages)
 - Total imports (direct + indirect)
 - Viability of the VC in the international economy: NPC, DCR
- Framing Question 2:
 - Income flows
 - Gini coefficient of the income distribution
 - Employment distribution along the VC

It allows stocking data and results in a normalized database, thereby facilitating understanding of the results and allowing for comparison and simulation.



Before starting the economic analysis



Understanding

- Diversity of actors : size, spatial location, techniques, vulnerable groups...
- Practices (processes, quantities, techniques, links with the others actors...)
- Different forms of the product along the VC: primary, processed, different qualities...
- Flows and markets: at different scales (local until international), spaces (urban/rural), gross, retail

Thinking

- Issue addressed and availability of information
- Scope of the studied system: functions, agents, operations, volumes
- Relations between agents: input/output (product), coordination...
- System of prices
- Level of detail? Level of precision?
- Self-consumption? By-products? Losses?...

