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## Cassava value chain in Kumasi, Ghana: A case study

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### Abstract

Cassava is a tuber crop originating in South America and grown in tropical and subtropical areas throughout the world. Cassava use varies significantly by region. In Africa, cassava is primarily grown for food; no continent depends as much on root and tuber crops in feeding its population as does Africa. The cassava value chain is one of the fast growing value chains in Kumasi, Ghana. The raw cassava is produced by farmers in and around Kumasi and its being brought to the market where the marketing and buying takes place and other products made from it. The overall objective of this study is to conduct a cassava value chains analysis in Kumasi, Ghana. The outcome of this study will contribute to the development of a strategic plan to improve the productivity and competitiveness of cassava to the benefit of all the chain actors.

**Keywords:** Ghana, Cassava, chain, Kumasi

### 1. Introduction

In Ghana cassava is primarily used for human consumption via sales of fresh roots and processed products in markets. However commercial use of cassava is increasing as a result of increased urban demand for processed cassava products and increased recognition of its industrial potential. Incomes from cassava production and post-harvest processing of cassava represent around one fifth of Ghana's agricultural GDP. With many people engaged in activities related to cassava it contributes significantly to incomes and rural livelihoods for both men and women. Further opportunities for increasing incomes from cassava exist with growing interest in utilizing cassava in different industries due to various factors including changes in technology and rising cost of the US dollar relative to local currency.

### 1.1 Methodology

For Cassava Value Chain analysis study was conducted in Techiman and Kumasi markets of Ghana, West Africa. Where we were privileged to interact with different actors in the cassava value chain. The actors visited in the market include farmers, Aggregators, Wholesalers, Retailers, Transporters, processors and consumers. Primary data were collected from the value chain actors. The direct value chain actors including farmers, Aggregators, Wholesalers, Retailers, Transporters, processors were selected and interviewed. Support service providers including researchers, transporters and policy makers were purposely selected considering the awareness and involvement involve in the cassava value chain in their respective region. We used two main tools to collect the data: (1) a focus group discussions protocol run at KNUST, Ghana to capture constraints, challenges and opportunities and information on value chain dynamism, and (2) in-depth semi-structural questionnaires to capture information on key value chain actors' map, cost, quantity and income distribution, actor characteristics, key constraints and opportunities, access to credits, etc.

## 2. Cassava value chain map: Kumasi, Ghana

### 2.1 Market survey

During the market survey and the value chain actors meeting, it was seen that the different value chain actors link with one another. The longer the value chains the higher the end prices. This was confirmed by gari processors who said that if they buy from farmers directly it tends to be cheaper as compared to buying from aggregators or wholesalers.

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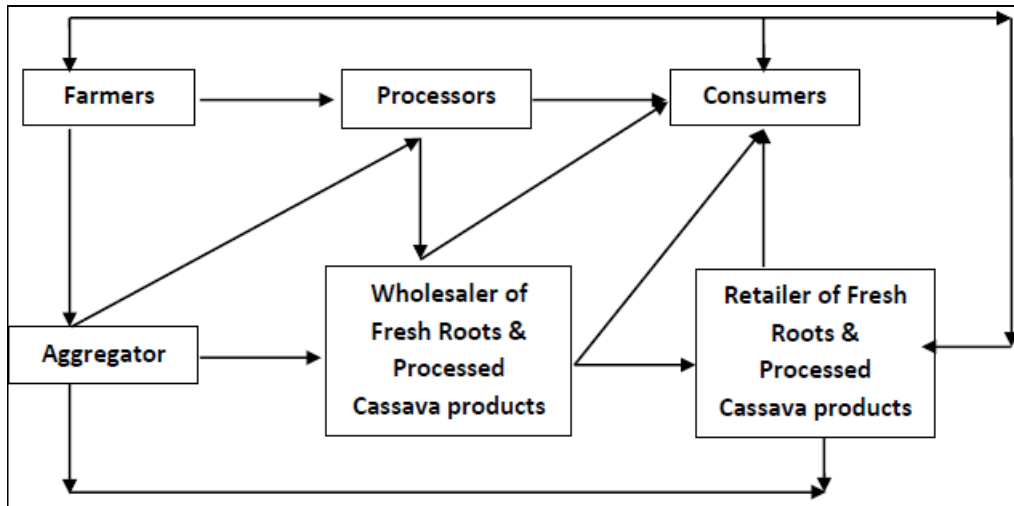


Fig 1: Number of value chains that was identified in cassava marketing.

**3. Strategic Options to improve the performance of cassava gari value chain in and around Kumasi, Ghana**

1. To take advantage of the fact that cassava is used for many products
2. To reduce the negative impact of the high costs of technology

Table 1: Strategic Options to improve the performance of cassava gari value chain in and around Kumasi, Ghana

Strategic option	Indicators	Activities
1. To take advantage of the fact that cassava is used for many products	To make 70% of the aggregators and collectors aware of the potential and realistic market outlets for cassava in Kumasi by 2020	1. Map out all product chains
		2. To conduct a survey to find out the percent of collectors supplying each outlets
		3. Conduct capacity building workshop for cassava collectors on awareness of other outlets
2. To reduce the negative impact of high cost of technology	To improve the processing conditions for 60% of gari processors by use of low costs technology by 2020 in Kumasi	4. Capacity building for gari processors on health precautions
		5. Procurement and supply for co-funded processing low cost equipment for gari
		6. Identify low cost technology options for gari processing

**4. Stakeholders Analysis**

The stakeholders for the cassava value chain were identified and their roles also listed. The stakeholders were then ranked on importance and influence in the cassava value chain. It was

found out that consumers are the most influential in the value chain however considered list important, Government was considered as having little impact in the cassava value chain.

Table 2: Stakeholders Analysis

Stakeholder’s analysis for cassava value chain and ranking them in order of importance and influence			
Stakeholders	Roles	Importance	Influence
Farmers/Producers	Production of Cassava	4	5
Aggregators	Supply Cassava to Processors, Retailers & Wholesalers	2	4
Processors	Buy bulk cassava for Processing and cassava products production	3	6
Wholesaler of Fresh Roots & Processed Cassava products	Buy bulk cassava and processed Cassava products, supply to retailers and directly to consumers	6	7
Retailer of Fresh Roots & Processed Cassava products	Buy bulk cassava & processed Cassava products, supply directly to consumers	5	2
Government	Support production of cassava, Promote production of improved cassava varieties, Responsible for rules and regulations of market	1	3
Consumer	Create demand for cassava and cassava products	7	1

**5. Scenario Analysis**

The scenario analysis was for collection and processing of cassava in Kumasi, Ghana. Drivers for the scenario was identified and based on that the trends for the drivers were also identified as what is bringing forward the drivers and we agreed whether the trends would be certain or uncertain. And the two (2) uncertain trends affecting collection and

processing of cassava were identified which was most important and they were

1. Cheaper products from export
2. Processing volumes of cassava

These two trends affect collection and processing of cassava in Kumasi, Ghana and were used to draw the scenario matrix.

**Table 3:** Scenario Analysis

Scenario analysis for the cassava processing in Kumasi, Ghana		
Drivers	Trends	Certain/ Uncertain
Trade Agreement	Availability of Substitutes	Certain
	Cheaper Products from Imports	*Uncertain
Climate Change	Fluctuations in supply of cassava	Certain
	Undesirable Characteristics of raw cassava	Certain
Taste and Preferences	Demand for cassava product	Uncertain
	Collection volume for cassava product	Uncertain
	Processing volume of cassava	*Uncertain
Urbanization	Increased demand for value addition	Certain
	Increased demand for substitutes	Uncertain
Commodity Market	Increased processing for export market	Uncertain
	Increased number of new market players	Certain

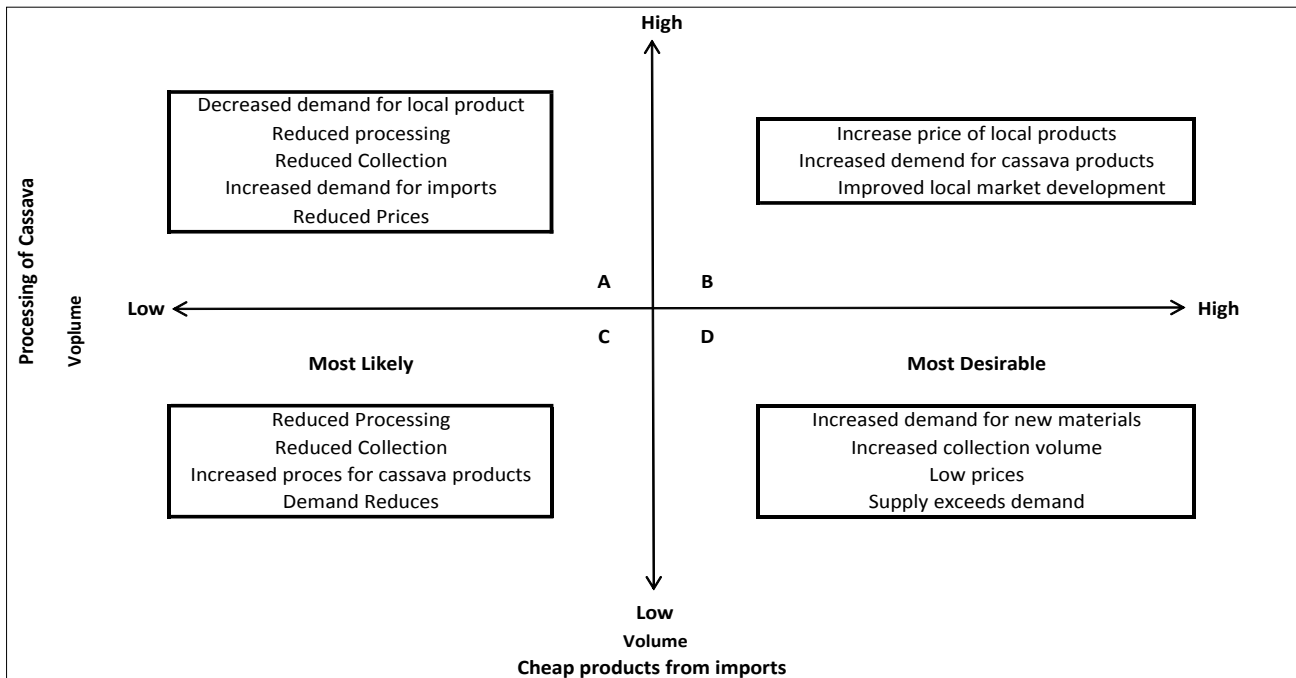
**Note:** \*Indicates Most Important

**6. Scenario Matrix**

The scenario matrix helped us to understand what the effect of high or low cheaper products from imports and having high or

low processing volumes of cassava would have an effect on the collection and processing of cassava in Kumasi, Ghana.

**Scenario Matrix**



**Fig 2:** Scenario Matrix

It was seen that low volumes of cassava processing and high imports on cheaper products of cassava caused:-

- Reduced demand for local products
- Reduced processing of cassava
- Reduced collection and reduced prices
- Reduced collection of cassava

However, high cassava processing verses high imports on cheaper products caused:-

- Increased price for local products
- Increased demand for local products
- Improved market development

Low volumes of cassava processing and low imports of cheaper products caused:-

- Reduced processing of cassava
- Reduced collection of cassava

- Increased prices for cassava products
- Reduced demand for products

However, High volumes of cassava processing verses low imports of cheaper products caused

- Increased demand for raw materials
- Increased collection volumes for cassava
- Low prices
- Supply exceeds demand

**6.1 Most desirable situation**

Is when there are high collection volumes of cassava and low imports of cheaper cassava products of cassava?

**6.2 Most likely situation**

Is when there are low processing volumes of cassava and low imports of cheaper products of cassava?

## 7. Conclusions

The cassava value chain is a very lucrative chain and cassava being a root starch crop and food security crop has many end users / products. However, the current cassava value chain is very long sometimes and this causes high transaction costs and high prices to the end users. It's seen that the shorter the value chain the lower the transaction costs therefore it's good to shorten the chain where possible to reduce transaction costs and improve on the income of the people engaged in the business. As per the study it was found that about 85% of total volumes of cassava follow the farmer- aggregator-processor- consumer value chain

The government needs to invest more in the cassava value chain especially by supporting the farmers of cassava to produce the right variety of cassava for the right purpose and also the processors allow more volumes being processed as compared to now that they are using local technologies to process yet there is good market for it.

## 8. Acknowledgment

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