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# PROMOTING THE DEVELOPMENT OF FOOD VALUE CHAINS IN AFRICA 2015 - GHANA

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March 22, 2016

Prepared by Promar Consulting



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## FOREWORD

This report reflects the findings of Promar Consulting's research on Sub Saharan African food value chains conducted under the Japanese Ministry of Agriculture, Forestry and Fisheries (MAFF) project "Promoting the Development of Food Value Chains 2015", part of its Bilateral Business Development Assistance program for Africa. This report focuses on Ghana and Promar Consulting's work on Kenya and South Africa's food value chains can be found in separate reports.

While there is a continued need for assistance focused in the fields of agriculture, forestry and fisheries, MAFF also recognizes that the markets of Sub-Saharan Africa, with their increasing populations and growing economies, are promising markets with high future potential. MAFF believes that information and analysis of the present situation and future challenges in food value chains in Sub-Saharan African countries is essential for helping Japanese companies successfully enter these markets and integrate Sub Saharan Africa into global food chains. It was against this background that this project was launched.

This 2015 project also included a business mission to Kenya with public and private sector participants, a workshop conducted in Nairobi and support for bilateral policy dialogues. A summary of these activities as well as the findings on Ghana and South Africa are all outlined in separate reports and are available for your reference.

Ghana is a country that mainly exports cacao beans and gold. Since the discovery of oil deposits in 2007 the country has shown a remarkable economic growth. Along with the increase in urban population, the middle class has expanded, which made Ghana one of the Lower Middle Income Countries in 2010. The government of Ghana aspires to be a Middle Income Country by 2020 through its national development plan. Political environment in Ghana has been stable, which gives the country geographic and economic advantages to be the physical distribution hub in West Africa. In the food sector, the country enters the new phase of expansion of modern retail businesses and construction rush of shopping centres, which is expected to accelerate as the middle class further expands. On the other hand, rain-fed dependent agriculture faces a significant challenge of instable supply, boosting the import of food products such as rice, sugar and meat. Business opportunities are expected in improvement of use of inputs through partnership with NGOs to improve productivity, provision of quality materials and equipment to exporters, and introduction of equipment to retailers to help build cold chain.

This report is intended to make useful information on Ghana's FVC widely available to Japanese businesses and international organizations interested in Ghana. This report gives an overall picture of Ghana's food value chains, covering the agriculture, livestock and fisheries industries, as well as the systems which support them: inputs, food processing, export, domestic distribution, physical distribution, and pertinent machinery and equipment. In addition, major players acting in the FVCs and relevant government policies are described.

We recognize that it is extremely difficult to assess the full complexities of Ghana's agriculture, livestock and fisheries industries and the various food value chains within the constraints of this project. We will be grateful if readers will point out any shortcomings or errors which may be found in this report. Promar Consulting is solely responsible for the content of this report, which in no way represents the official views of the Ministry of Agriculture, Forestry and Fisheries of Japan.

The core of this research is based on interviews we conducted with numerous experts and industry

professionals both in Japan and in Ghana, including private companies, research institutes, farmers and others. Although it is not possible to list all the names, we are deeply appreciative of their input and cooperation.

We hope that those interested in Ghana's food value chains find this report to be a useful tool to deepen their understanding of Ghana's agriculture, livestock and fisheries industries, its food industries and relevant government policies, and ultimately benefit Japan-Ghana relations and contribute to promote cooperation for Sub-Saharan Africa development.

Rie Yoshida  
Administrator, Corporate Director  
Promar Consulting



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## Notes :

This project was commissioned by the Japanese Ministry of Agriculture, Forestry and Fisheries and conducted by Promar Consulting. Promar Consulting takes full responsibility for the wording and content of the report.

### [Exchange rate]

	Yen/USD	GHS/ USD
2014	105.94	3.1
2013	97.60	2.1
2012	79.79	1.9
2011	79.81	1.5
2010	87.78	1.4
2009	93.57	1.4
2008	103.36	1.1
2007	117.75	0.9
2006	116.30	0.9
2005	110.22	0.9

Source) World Bank

## [Abbreviations]

Name	Abbreviations
African Development Bank	AfDB
Economic Community of West African States	ECOWAS
Foreign Direct Investment	FDI
Ghana Investment Promotion Centre	GIPC
Organization for Economic Co-operation and Development	OECD
West African Economic and Monetary Union	UEMOA
Ghana Shared Growth and Development Agenda	GSGDA
Ghana Railway Company	GRC
Ghana Railway Development Authority	GRDA
Ghana Airports Company Limited	GACL
ECOWAS Trade Liberalization Scheme	ETLS
Common External Tariff	CET
Food Value Chain	FVC
Joint Border Post	JBP
Gross Domestic Products	GDP
Global Food Value Chain	GFVC
Coalition for African Rice Development	CARD
International Trade Center	ITC
Japan International Cooperation Agency	JICA
Ministry of Food and Agriculture	MOFA
National Rice Development Strategy	NRSD
Ghana Irrigation Development Authority	GIDA
Industrial Development Fund	IDF
Food and Agriculture Sector Development Policy	FASDEP
Medium Term Agriculture Sector Investment Plant	METASIP
President's Special Initiative	PSI
Ghana Cocoa Board	COCOBOD
Official Development Assistance	ODA
Organisation for Economic Co-operation and Development	OECD
Licensed Buying Company	LBC
Quality Control Company	QCC
Cocoa Marketing Company	CMC
Sea-Freight Pineapple Exporters of Ghana	SPEG
U.S. Department of Agriculture	USDA
Fertiliser Subsidy Program	FSP
Agricultural Mechanization Services Enterprise Centers	AMSEC
Tokyo International Conference on African Development	TICAD



# 1 OBJECTIVES AND PROJECT BACKGROUND

## 1.1 Objectives of the Project and Scope of the Study

This research on Ghana's food value chains was conducted under the Japanese Ministry of Agriculture, Forestry and Fisheries (MAFF) project "Promoting the Development of Food Value Chains 2015", part of its Bilateral Business Development Assistance program for Africa. This chapter will outline the objectives and scope of the project as well as provide background on Ghana's investment environment and Japan's support of food value chain development in Ghana.

### 1.1.1 Objectives of the Project

In light of the expected doubling of the size of the world food market from 340 trillion yen in 2009 to 680 trillion yen in 2020, MAFF established its Global Food Value Chain (GFVC) Strategy in 2014 with a view to understanding the rapidly growing world food market and encouraging Japan's agricultural and food industries to expand their businesses overseas. The strategy has identified seven regions of the world that have a strong need for private sector investment and offer opportunities for public-private joint efforts. These regions are: (1) ASEAN, (2) China, (3) India, (4) Middle East, (5) Latin America, (6) Africa, and (7) Russia and Central Asia.

With respect to (6) Africa, the strategy calls for the development of high value-added food value chains through agricultural development aid under the TICAD framework and support for food and nutrition security as well as working with private sector investment to increase farm production and reduce production costs through introduction of improved seeds and farm machinery, irrigation systems and fertiliser application. The strategy aims to promote of high valued-added agriculture, diversification into processing and distribution from primary production (sixth sector industrialization), and development of distribution networks which connect farms with domestic consumer and export markets.

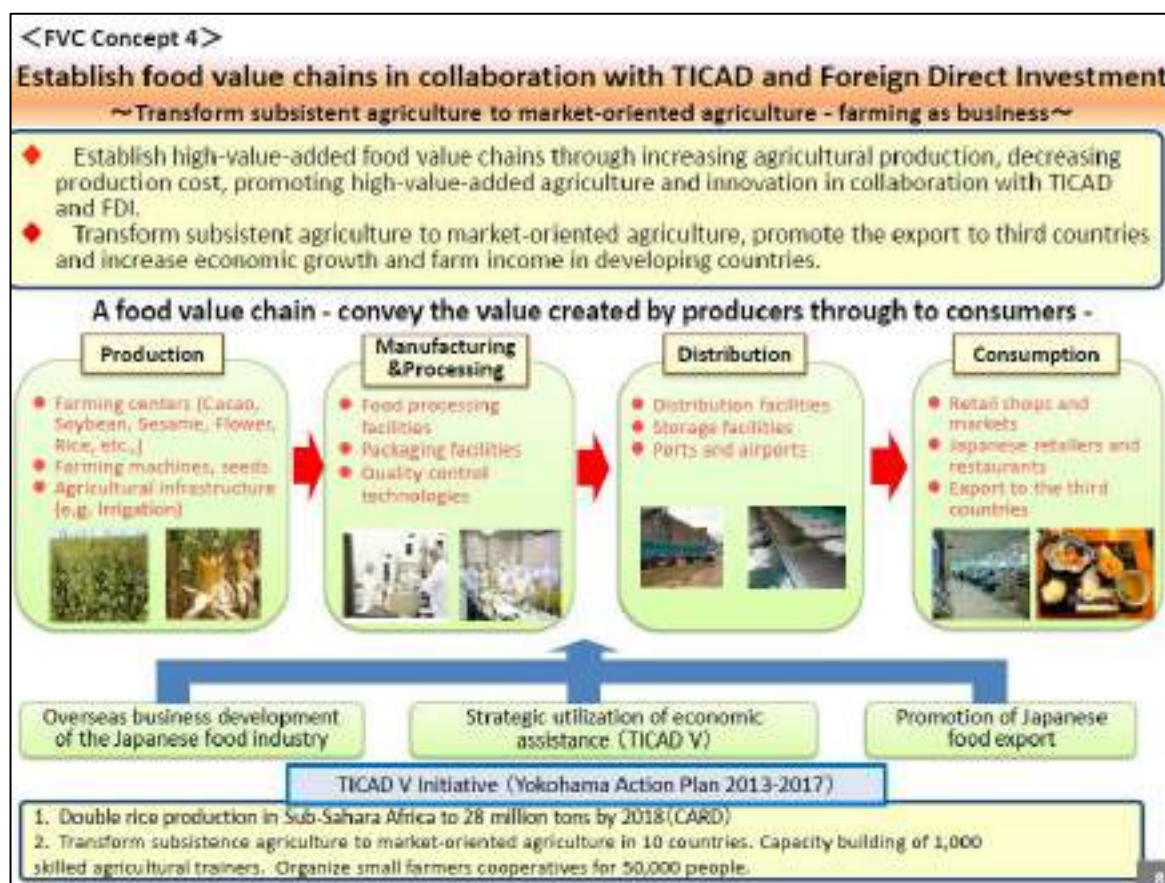
Most Japanese companies involved in FVC activities in Africa have traditionally been based in Southern Africa, especially the Republic of South Africa, a G20 member country. There is however an increasing interest in Kenya and other East African countries and in Ghana and other West African countries, where the middle class population is expanding. This research project focused on these three countries (Kenya, Ghana, RSA) and examined the opportunities for Japanese agriculture and food industries to develop businesses linked to the food value chains in these countries.

More specifically, we conducted the following activities:

- Support for bilateral project development in Ghana (a research study on FVC development)
- Support for bilateral project development in Kenya (a research study on FVC development, support for bilateral policy dialogue, support for organization of workshops)
- Support for bilateral project development in South Africa (a research study on FVC development)

This report is the results of the research study on Ghanaian FVC development.





**Figure 1 Overview of Food Value Chains in Africa**

Source) Ministry of Agriculture, Forestry and Fisheries "The Global Food Value Chain Strategy" March 2015  
[http://www.maff.go.jp/e/gfvc/pdf/20150313\\_overview\\_of\\_the\\_gfvc\\_strategy.pdf](http://www.maff.go.jp/e/gfvc/pdf/20150313_overview_of_the_gfvc_strategy.pdf)

### 1.1.2 Scope of the Study

The methodologies used for the study include a desktop literature review, a questionnaire survey of the member companies of Japan's Public-Private Council for Promoting the Global Food Value Chain, with follow-up interviews, as well as field research in Ghana (November 22– 29).

The scope of the study covered:

- ① An overview of Ghana's food value chains, its consumer market and major investments (domestic and foreign) in FVCs

and

- ② Analysis of major Ghanaian FVCs (both by product and cross-sectional) in which opportunities exist for Japanese companies

On the first point (① overview), we present a comprehensive picture of the food value chain in Ghana encompassing agriculture, livestock and fisheries, inputs, downstream processing, exports, domestic distribution as well as logistics, IT, financing, and machinery and equipment. In addition, information and data on major players in the FVC and related government policies have been collected and summarized.

On the second point (② sectorial study), we present market entry opportunities that, on the basis of our

field research we believe exist in Ghana's FVC. These opportunities are discussed by major product category as well as by cross-sectorial (functional) category such as cold chain, agricultural inputs, machinery and food processing.

## 1.2 Ghana's Economic Situation and Investment Climate

### 1.2.1 Population and Economic Trends

#### Population, GDP and Employment

The estimated population of Ghana in 2015 was 27.4 million, the ninth largest in Sub-Saharan Africa. It is a multi-ethnic country which includes around 50% Akan ethnicity. The official language of Ghana is English with a population growth rate of 2.3%, expecting to reach 50 million by 2050. The overall population in West Africa was 350 million in 2015 and it is expected to reach 800 million by 2050. While half of the growth is expected from Nigeria, Ghana has the third-largest population after Niger, which displays significant growth.

Ghana was the first independent nation in Sub-Saharan Africa, where cocoa bean and gold production since the colonial period has led the steady growth of the economy. However, due to a series of political disruptions and economic policy failures from late 1970s to early 1980s, the country has marked negative growth. Since 1983 Ghana has implemented the IMF and the World Bank structural adjustment policies which pushed up its economic growth rate to a stable 3-5%.

Since 2000, Ghana's economy has jumped even more, driven by the price hike of cocoa in the international market. In addition, oil reserves were discovered off the coast of Ghana in 2007 and commercial production began in 2011, pushing the country to grow by double-digits. Today Ghana exhibits high growth of over 4%. The GDP in Ghana was 38.6 billion US dollars in 2014, while its GDP per capita was 1,442 US dollars. In West Africa, it is the third largest economy after Nigeria and Cote d'Ivoire. However, the country faces a significant problem with financial deficit due to the bloated public sector, 10% against the GDP in 2014, with a high inflation rate. In 2015, the Ghanaian government received support programs of 1 billion US dollars from the IMF mainly to improve its financial health.

Services account for the largest share of GDP and its growth rate in 2014 (5%) was higher than the average growth rate of total GDP (4%). In the services sector, transportation and warehousing has the highest share followed by finance and industry, then hotels/ restaurants. Agriculture comprises 21% of total GDP and it grew 4.3 times over 10 years on a GDP basis. However, the share of agriculture has shrunk since commercial oil production began. Still, agriculture including cocoa is the largest economic sector in Ghana, consisting of some 17% of its GDP.

The total labour force in Ghana is 11.37 million and the agricultural sector employs 44.7%. The smallest is the industrial sector, which accounts for 14% of the total employment<sup>1</sup>. Advancement of urbanization is another characteristic of Ghana. In 2009, the urban population has become equal to the population in farming villages for the first time and today 53.4% of the population lives in the cities. Urbanization has advanced at a rate of 3-4%, which is expected to continue for some time. Therefore, shaping proper

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<sup>1</sup> World Bank, World Development Indicators

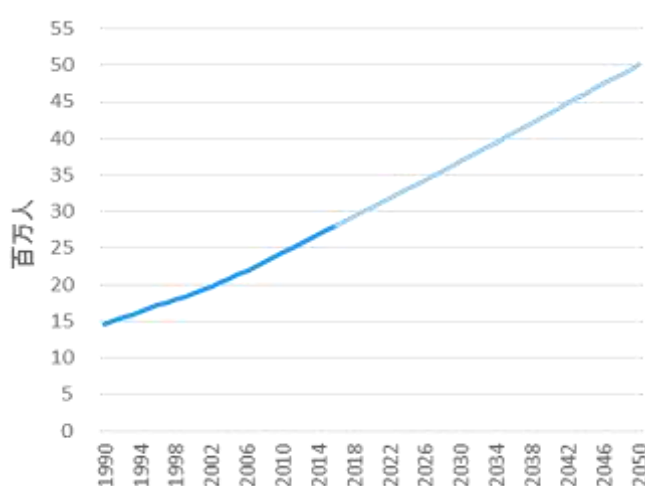


infrastructure in urban areas is a critical task for the country.

## Government and Regions

Ghana is a representative democratic republic. The parliament of Ghana is a unicameral legislature where the President is directly elected by voters. Since the shift to civilian rule in 1993, the country has been a stable democracy where the change of government between ruling and opposition parties has been executed peacefully. Ghana is divided into 10 regions. Accra, the capital city by the coast, and Tema port are located in Greater Accra Region, a critical area for politics, economy and trade. The inland Ashanti Region is known for its gold and cocoa production. Its capital city Kumasi is also the second largest city in Ghana and the Ashanti Region has the largest population in the country. Crude oil is extracted offshore in the Western Region, where Takoradi port plays an important role in the industry sector.

**Figure 2 Ghana population estimates and forecasts**

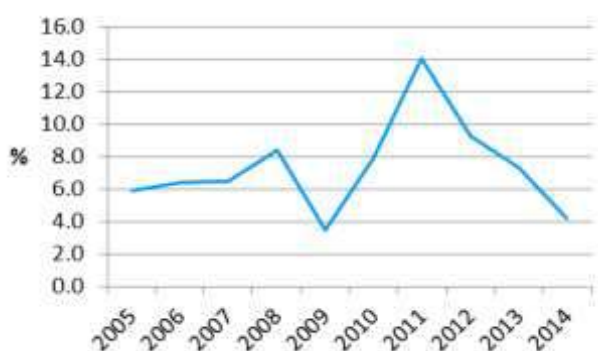


Population distribution in Western Africa (2015)

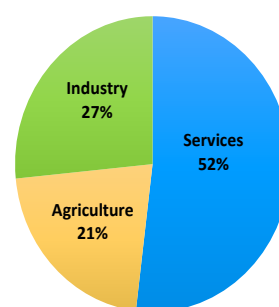
Africa	1,186,178
<b>Western Africa</b>	<b>353,224</b>
Nigeria	182,202
<b>Ghana</b>	<b>27,410</b>
Côte d'Ivoire	22,702
Niger	19,899
Burkina Faso	18,106
Mali	17,600
Senegal	15,129
Guinea	12,609
Benin	10,880
Other	26,688

Source) UN World Population Prospects :2015 Revision

**Figure 3 GDP growth and GDP by sector**



Real GDP Growth Rate



Real GDP by Sector (2014)

Source) World Bank, Ghana Statistical Service

**Table 1 Contribution to GDP and GDP growth rate by sector**

Contribution to GDP by major sectors (%)			GDP growth rate of the major sectors (%)		
	2013	2014		2013	2014
CROPS (INC.COCOA)	17.4	16.8	INFORMATION · COMMUNICATION	24.3	38.4
CONSTRUCTION	12.0	12.7	FINANCE · INSURANCE	23.2	22.9
TRANSPORT · STORAGE	11.2	12.3	EDUCATION	6.9	7.1
FINANCIAL · INSURANCE	6.5	8.4	CROPS (INC.COCOA)	5.9	5.7
MINING	9.4	8.0	ANIMAL HUSBANDARY	5.3	5.3
HOTELS · RESTAURANT	5.8	5.6	FORESTRY	4.6	3.8
TRADE	5.8	5.6	MINING	11.6	3.2

Source) Ghana Statistical Service

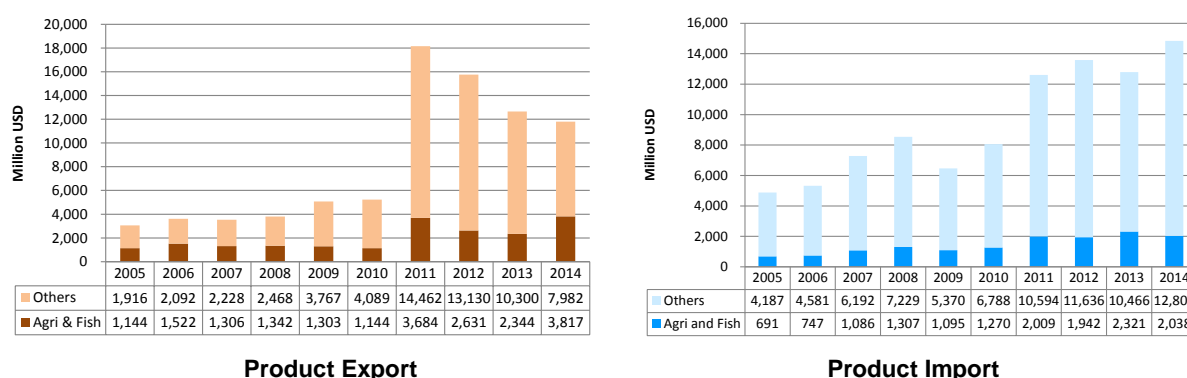
## Trade in Goods

Ghana relies on imports of oil and machinery. Although Ghana had been a net importer until 2010, once the oil exports from the Jubilee field offshore Ghana were discovered in 2007 the overall export value of Ghana significantly climbed and Ghana was a net exporter until 2013. However, due to the falling oil prices, Ghana's exports shrank gradually, while its imports increased to meet the high domestic demand and the country returned to being a net importer in 2014.

Ghana mainly exports oil, cocoa, gold and timber products. Agricultural products including cocoa contribute 32% to overall exports, out of which 80% are cocoa. Its major imports are machinery, oil and food items.

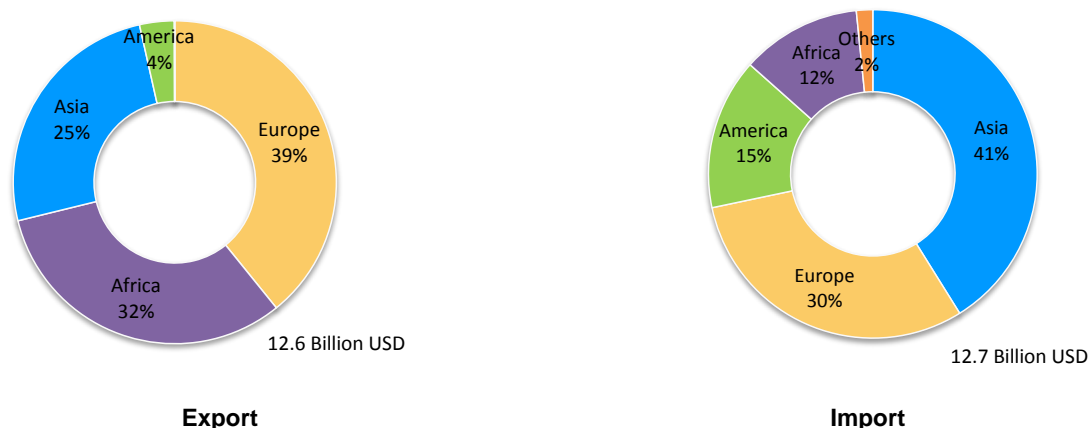
In 2014, 39% of Ghana's exports were to Europe, 32% to Africa and 25% to Asia. In Africa, most of the exports were to South Africa, followed by the countries in West Africa such as Burkina Faso and Benin. Ghana imports mainly from Asia, in particular China, which accounts for 41%, followed by Europe, 30%, and the United States, 15%. Africa only accounts for 12%, which is relatively low.

**Figure 4 Ghana's Product and Service Trade**



Source) ITC Trade Map

**Figure 5 Ghana's Trade by Area (2014)**



Source) ITC Trade Map

## Foreign Investments

Foreign direct investment in Ghana is the second highest in West Africa after Nigeria, supported by Ghana's stable political system, relatively good investment environment, strong services and industry sectors. In 2013, approximately 3.2 billion US dollars of investment was made. Recently, Jubilee Oilfield and gas field development by international businesses has been more active and energy development has become a critical sector for attracting investment.

**Table 2 Inward FDI comparison within West Africa (USD Million)**

	2013	2009-13 Annual Total		2013	2009-13 Annual Total
Nigeria	5,609	36,155	Mali	308	2,280
Ghana	3,227	14,644	Senegal	298	1,509
Côte d'Ivoire	371	1,749	Guinea	135	1,939

Source) World Bank, World Data Bank

In the World Bank's Doing Business 2016, Ghana ranked 114 out of 189 countries; it is considered to offer one of the better business environments in Africa and especially highly evaluated for the ease of funding and investor protection. On the other hand, the country faces challenges in the investment environment such as high interest rates and the weakness of the local Ghanaian Cedi, due to lower crude oil prices caused by a current accounts imbalance, which exposes international businesses to currency risk.

**Table 3 Changes in the inflation rate and the policy interest rate (2010-2014)**

	2010	2011	2012	2013	2014
<b>Inflation rate (% , annual)</b>	10.7	8.7	9.2	11.6	15.5
<b>Policy interest rate (% , December)</b>	13.5	12.5	15.0	16.0	21.0

Source) World Bank and Bank of Ghana

According to the FDI data compiled by the Ghana Investment Promotion Centre, most of the investments in Ghana are focused on services, trading and manufacturing while both the value and number of investments in the agricultural sector are less frequent, only 15 million US dollars for two investments from January through September 2015 (see table below). In 2015, the largest investor was China, which registered a total of 21 new investment projects in Ghana.

**Table 4 Trends in FDI to Ghana**

No. of projects						Estimated Investment Value (USD Million)					
No.	2011	2012*	2013	2014	2015*	Estimated value	2011	2012*	2013	2014	2015*
Agriculture	10	11	14	7	2	Agriculture	513	14	154	23	15
Construction	49	42	61	8	14	Construction	6,067	2,278	1,498	22	350
Export business	24	9	12	12	3	Export business	8	20	11	14	1
Trade	110	66	90	29	17	Trade	99	149	308	101	113
Liaison	25	13	25	28	15	Liaison	27	151	646	258	7
Manufacturing	76	41	63	57	31	Manufacturing	358	1,847	521	1,391	148
Services	195	108	131	38	35	Services	609	505	1,059	1,282	1,052
Travel	25	15	22	4	3	Travel	5	11	65	33	601
Total	514	305	418	183	120	Total	7,686	4,974	4,261	3,124	2,287

※2012 and 2015 (Duration :Jan-Sep)

Source) GIPC

One example for investment in the agricultural sector is Safi Sana Ghana Ltd. (Netherlands) which invested 1.69 million US dollars in Ghana in the fourth quarter of 2015. The company plans to build factory which transforms organic waste into bio-energy and fertiliser in Ghana. By doing so, it aims to improve the sanitary situation of the urban poor as well as contribute to solving the energy problem of Ghana through providing clean energy. <sup>2</sup>

Another example is Wilmar (Singapore), the world's largest cooking oil manufacturer which invested 200 million US dollars in Ghana in 2011<sup>3</sup>. The company has also become the largest shareholder of Benso Oil Palm Plantation Limited (BOPP) and works to improve the productivity of its palm plantation. Wilmar plans to export cooking oil manufactured in Ghana to other West African countries such as Burkina Faso, Togo, Benin and Mali and announced its plan to build a 16 million US dollars cooking oil refinery in 2013. <sup>4</sup>

## Foreign Assistance

Official Development Assistance to Ghana reached 1.4 billion US dollars in 2013, showing a decline from prior year<sup>5</sup>. Past major aid donors include the World Bank, the United States, the UK and the African Development Bank. According to the OECD, major areas of ODA assistance in 2013 were development of social infrastructure including education, health, development of economic infrastructure (physical distribution and energy) and production (agriculture and industry), which altogether accounted for over 40%. The share of ODA in GNI has been dropping. Since it was ranked as a lower middle income country in 2010, the Ghanaian government now aspires to become a middle income country by 2020 as a long-term goal. To achieve this, the government has established the Ghana Aid Policy & Strategy to further efficiently coordinate and collaborate with external assistance. The government of Ghana will arrange with donors in accordance with the Ghana Shared Growth Development Agenda, which is the long-term policy strategy of

<sup>2</sup>

<http://www.gipcghana.com/phocadownload/reports/quarterly/2015/q3%202015%20gipc%20quarterly%20investment%20report.pdf>

<sup>3</sup> GIPC Quarterly Update, Volume 7 Issue 3, Oct. 2011

<sup>4</sup> <http://www.annualreportsghana.com/News/Wilmar-Africa-to-open-With-Palm-Oil-Refinery-in-Gh.aspx>

<sup>5</sup> OECD-DAC

the government.

When looking at the main areas of assistance by the major aid donors, the World Bank mainly aids Infrastructure, Productivity and Employment while the United States assists Administration most, followed by Productivity and Employment. The UK aids Ghana through various projects, around the two pillars of women's development and development in the northern savannah<sup>6</sup>. The African Development Bank focuses on economic and structural adjustment assistance for improvement of productivity of small and medium agricultural enterprises, and business environment improvement. Japan focuses on 4 areas: a) Agriculture (rice cultivation), b) Infrastructure (electricity and transport), c) Health and Science/Mathematics education, and d) Capacity Development in Administrative and Financial Management. In recent years, assistance from emerging countries such as China, South Africa and Brazil has also been seen. According to the donor assistance report compiled by the government of Ghana, the country receives more assistance from BRICS than the World Bank and those countries became the largest donors in 2012. In particular, China provides strong economic support in the infrastructure sector, such as dams and power plants<sup>7</sup>.

**Table 5 Ghana ODA: Major Donor Countries/International Institutions (2012-2013 Par. USD Million)**

Total	1,670	UK	149	IMF	91
IDA	350	AfDF	148	Japan	91
USA	168	Canada	100	Denmark	85

Source) OECD - DAC ; <http://www.oecd.org/dac/stats>

**Table 6 Assistance by Major Donor Countries (2012, USD Million)**

Donor countries • Agencies	Macro-economic stabilization	Strengthening the private sector competitiveness	Modernizing agriculture/Natural resource management	Infrastructure & housing	Energy, Oil, Gas	Human development, Productivity improvement, Employment	Strengthening administrative functions	Total	%
BRICS	-	200.00	733.00	6,952.81	1,960.55	1,054.00	277.65	11,178.01	48.99
World Bank	319.00	135.70	420.99	684.74	345.85	187.20	353.00	2,446.48	10.72
USA (USAID)	-	270.68	-	-	-	527.28	902.95	1,700.91	7.45
AfDB	111.00	92.20	183.86	513.61	126.18	214.99	37.50	1,279.34	5.61
Netherlands	-	-	81.94	206.21	95.80	374.40	-	758.35	3.32
EU	139.41	11.93	27.60	278.58	-	3.82	90.62	551.96	2.42
UK	58.00	108.00	-	-	-	242.68	-	408.68	1.79
AFD	57.98	2.64	46.28	128.53	-	-	129.06	364.49	1.60
Canada	58.06	-	141.86	30.83	-	-	110.22	340.97	1.49
Denmark	71.47	77.21	-	30.01	-	-	109.21	287.90	1.26
Japan	12.62	-	-	103.51	50.00	-	-	166.13	0.73
Germany	38.65	7.40	32.62	43.11	-	12.49	17.60	151.87	0.67
United Nations	-	2.40	63.44	0.83	-	40.34	36.11	143.12	0.63
IMF	-	-	-	-	-	-	-	-	-
Others	-	84.88	166.87	1,404.37	497.04	849.21	36.54	3,038.91	13.32
Total	866.19	993.04	1,898.46	10,377.14	3,075.42	3,506.41	2,100.46	22,817.12	100
%	3.80	4.35	8.32	45.48	13.48	15.37	9.21	100.00	

Source) Africa Development Bank, "Republic of Ghana Country Strategy Paper 2012-2016", April 2012

<sup>6</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/412386/Ghana-summary.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/412386/Ghana-summary.pdf)

<sup>7</sup> [http://www.ccs.org.za/downloads/DFID\\_FA\\_Final.pdf](http://www.ccs.org.za/downloads/DFID_FA_Final.pdf)

### 1.2.2 Logistics Infrastructure – Ghana as a Lifeline in West Africa

Thanks to relatively stable political environment in West Africa, Ghana has increased its importance recently as a distribution and logistics lifeline for the inland countries in the region. In order to meet the growth in the distribution volume driven by the economic growth, the government of Ghana has advanced a road improvement and expansion plan which covers the majority of transportation. In the north-south corridor from the coast of Ghana to Burkina Faso, maintenance and improvement of the eastern corridor between Tema and Kulungugu, and the western corridor between Elubo and Hamile has been addressed.

JICA also proactively supports distribution system maintenance and improvement in the Economic Community of West African States including Ghana<sup>8</sup> and the West African Economic and Monetary Union<sup>9</sup>, rolling out the Detailed Design Survey on a New Bridge across the Volta River on the Eastern Corridor Project (May 2014-) in Ghana and the Project on the Corridor Development for West Africa Growth Ring Master Plan (May 2015-) for improvement of the physical distribution network in all of West Africa. The West Africa Growth Ring is not only a trunk road connecting the major cities in the region including the Ghanaian capital Accra but also an artery for smooth physical distribution into the landlocked countries and it is positioned as one of the critical corridors in Africa, in addition to the Mombasa Northern Corridor between Kenya and Uganda, and the Mozambique – Nakala Corridor (see figure below).

#### Road

Road transport accounts for 96% of passenger and freight traffic in Ghana<sup>10</sup>. Today, although the Central Corridor connecting the coast of Ghana to north through Burkina Faso is paved, it is significantly damaged and heavy traffic is seen constantly on the roads in the cities such as Accra and Kumasi. In rainy season, road conditions worsen causing serious issues in distribution and logistics. As stated in the shared growth and development agenda 2014-2017, Ghana aspires to position itself as a physical distribution hub in West Africa. The country has been advancing development of a legal framework, expecting public-private partnership to help maintain and improve existing roads and build new networks. A number of donor countries and organizations invested in maintenance and improvement of road infrastructure, which resulted in over 120 million US dollars a year until the mid-1990s.

<sup>8</sup> Benin, Burkina Faso, Cabo Verde, Cote d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo

<sup>9</sup> Burkina Faso, Guinea-Bissau, Cote d'Ivoire, Senegal, Togo, Niger, Benin, Mali

<sup>10</sup> <http://www.gipcghana.com/invest-in-ghana/why-ghana/infrastructure/transportation-infrastructure.html>

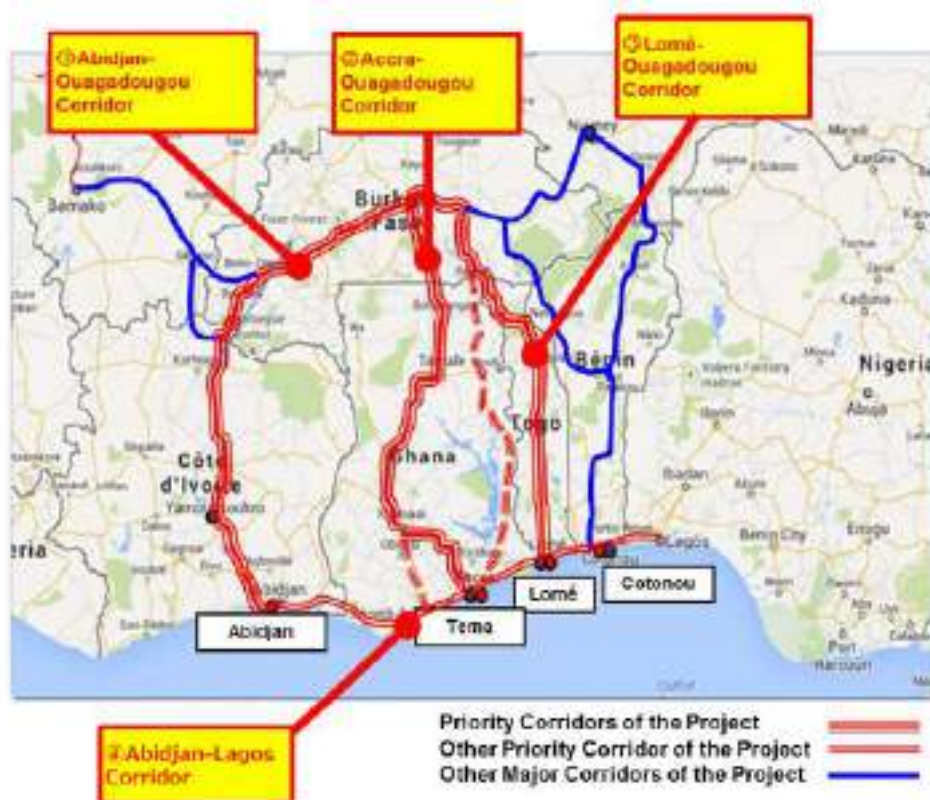


Figure 6 West Africa Growth Ring

Source) JICA, 2015, "Environmental and Social Considerations in Detailed Planning Survey- THE PROJECT ON THE CORRIDOR DEVELOPMENT FOR WEST AFRICA GROWTH RING MASTER PLAN"  
[http://www.jica.go.jp/english/our\\_work/social\\_environmental/id/africa/african\\_countries/c8h0vm000095a3ej-att/c8h0vm000095a3ia.pdf](http://www.jica.go.jp/english/our_work/social_environmental/id/africa/african_countries/c8h0vm000095a3ej-att/c8h0vm000095a3ia.pdf)

## Railways

Railways in Ghana are concentrated in the southern part of the country, linking the three cities of Tema-Accra by the coast, Kumasi in the heart of the country and Takoradi in the west (rail network of 950km). The network has played a critical role in hauling minerals, cocoa and timber. Today, railway tracks and train cars have been more deteriorated. The rail network is no longer widely used and most of the cargo from inland is transported by truck. The railways serve less than 2% of passenger and cargo transport in the country<sup>11</sup>. Manganese and bauxite are the main items being transported by rail since they are difficult to transport on the trunk roads. As of 2014, the government set out a plan to privatize the State-owned Ghana Railways Corporation (GRC) and to improve and expand the existing rail network through investment. As of 2014, the authority for the railway business, the Ghana Railway Development Authority rolled out five major development plans. The plans include construction of a part of the network by a Brazilian loan and construction through a public-private partnership<sup>12</sup>.

## Ports and Harbours

Tema port situated close to Accra handles the second largest amount of cargo in West Africa after Abidjan in Cote d'Ivoire. According to the Ghana Ports and Harbours Authority, Tema handled some 840,000 TEU

<sup>11</sup> [www.pwc.com/gx/en/transportation-logistics/publications/africa-infrastructure-investment/assets/ghana.pdf](http://www.pwc.com/gx/en/transportation-logistics/publications/africa-infrastructure-investment/assets/ghana.pdf)

<sup>12</sup> [http://www.mot.gov.gh/files/resources/Special\\_Report\\_on\\_Ghanas\\_Transport\\_Sector.pdf](http://www.mot.gov.gh/files/resources/Special_Report_on_Ghanas_Transport_Sector.pdf)



in 2013, a 64% increase from 10 years ago. However, the port faces serious capacity issues to serve the rapidly increasing amount of freight. One of the elements in this trend is that the port has increased its role as a trade hub, replacing the Port of Abidjan since 2011, following the conflict and instability in Cote d'Ivoire<sup>13</sup>. Since the number of berths and cranes to anchor large cargo vessels is limited, large ships have to wait up to 6 days out on the sea and warehouse space was not catching up to meet the increasing amount of cargo as of 2013<sup>14</sup>. In 2014, the Ghana Ports and Harbours Authority allocated 1.5 million US dollars to expand the port and after completion of the 4-year expansion plans, Tema is expected to become the largest port in West Africa<sup>15</sup>. The first reefer terminal for the port will also be constructed. Takoradi is the largest export port in Ghana and it is currently undergoing dredging works to handle the crude oil exports expected to increase in the future. Sekondi, the major fishing port in Ghana, is planning for expansion and ice works construction supported by JICA<sup>16</sup>.

## Airports

Kotoka International Airport in Accra handles the largest amount of cargo in West Africa<sup>17</sup>. In 2014, the airport handled 54,000 tons of cargo<sup>18</sup>. Export consists of 50% of the total and Kotoka has played an important role in the development of pineapple exports to the EU since the 1990s. Once the fresh pineapple export route to Europe was established, after the air freight routes transporting petroleum products from Europe to Nigeria started making a call in Ghana, pineapple export sector in the country has been growing<sup>19</sup>. There is a facility in the airport to store fresh fruits and vegetables for export, which was built in 2012 with support from the US. In addition to the refrigerated storage, the facility has packing rooms and processing capability which is run by Kenyan FWL, outsourced by the Ghana Airports Company Limited, to secure the cold chain and to add high value to the export of fresh fruits and vegetables. GACL also works on modernization of the Kotoka Airport. Building of the third terminal has been decided, which will be completed in 2016.

<sup>13</sup> [www.pwc.com/gx/en/transportation-logistics/publications/africa-infrastructure-investment/assets/ghana.pdf](http://www.pwc.com/gx/en/transportation-logistics/publications/africa-infrastructure-investment/assets/ghana.pdf)

<sup>14</sup> Netherlands Embassy in Ghana, 2015, "Sector Report: Port Development Ghana 2014"

<sup>15</sup> [http://www.joc.com/port-news/international-ports/ghana-port-triple-capacity-15-billion-expansion\\_20141118.html](http://www.joc.com/port-news/international-ports/ghana-port-triple-capacity-15-billion-expansion_20141118.html)

<sup>16</sup> [http://www.mot.gov.gh/files/resources/Special\\_Report\\_on\\_Ghanas\\_Transport\\_Sector.pdf](http://www.mot.gov.gh/files/resources/Special_Report_on_Ghanas_Transport_Sector.pdf)

<sup>17</sup> <http://www.gipcghana.com/invest-in-ghana/why-ghana/infrastructure/transportation-infrastructure.html>

<sup>18</sup> [http://www.gacl.com.gh/statistics\\_2.html](http://www.gacl.com.gh/statistics_2.html)

<sup>19</sup> <http://www.fao.org/3/a-ar708e.pdf>

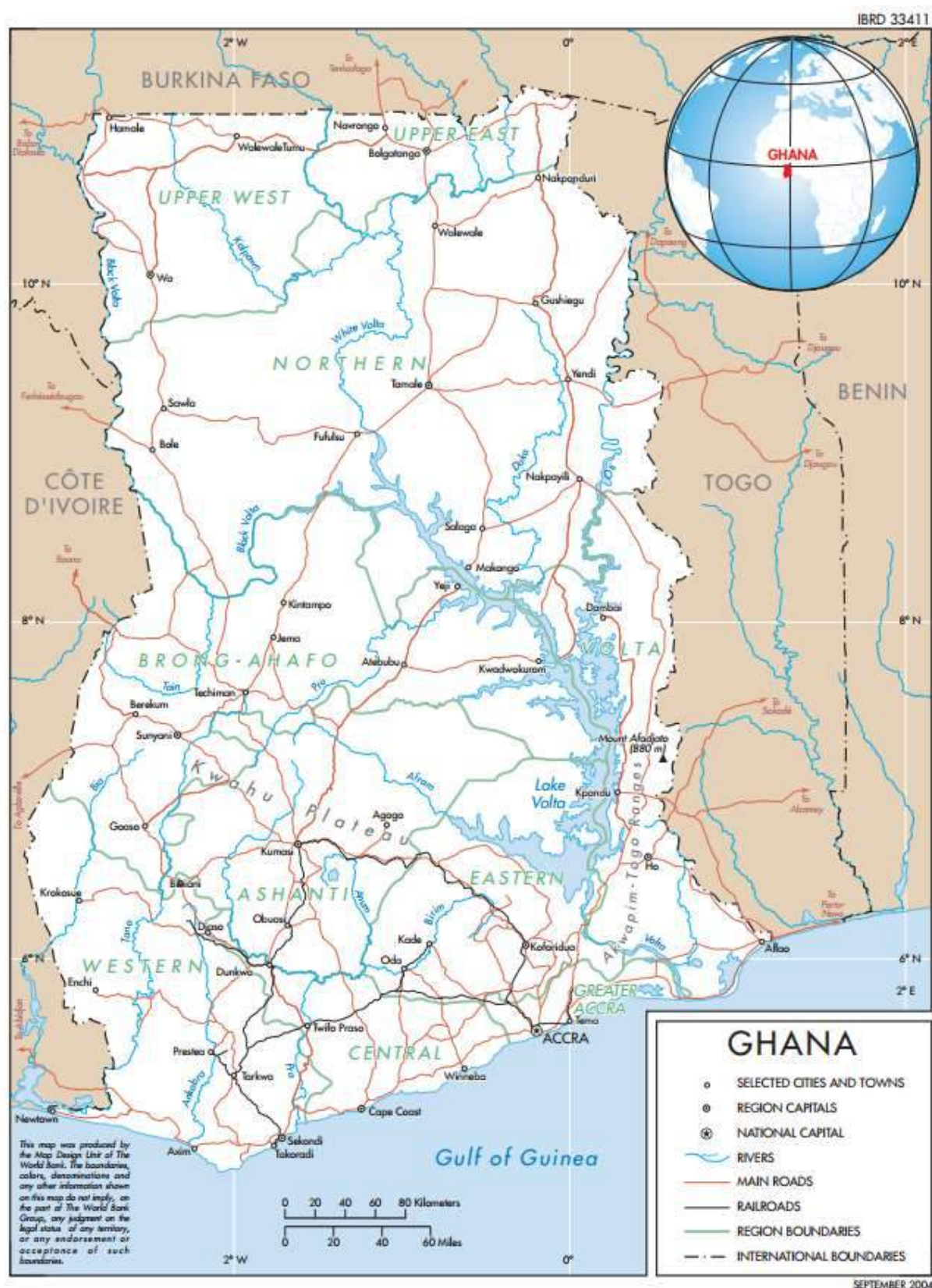


Figure 7 Ghana Logistics Infrastructure

Source) World Bank, "Country Assistance Strategy Progress Report for The Republic of Ghana for The Period FY13-FY16", August. 2013.

### 1.2.3 Economic Community of West African State (ECOWAS)

ECOWAS was established in 1975 via the treaty of Lagos to promote economic integration of the regional countries in West Africa. Today, there are 15 members in the economic community, accounting for 725 billion US dollars of GDP and 340 million people. The organization operates officially in three co-equal languages – French, English and Portuguese<sup>20</sup>. Under ECOWAS, there are two programmes: ECOWAS Trade Liberation Scheme (ETLS) and Common External Tariff (CET).

Figure 8 ECOWAS member countries



Source) ECOWAS

ETLS is a framework for the free movement of transport, goods and persons with an aim to promote trade within the region. In particular, it has been agreed to remove all tariff and non-tariff barriers to trade in the region. However, due to legislative differences among the states and insufficient communication at the borders, transport and trade within the region has not been liberalized in reality. Encountering tariff and non-tariff barriers such as quantity, quota and seasonal restrictions have been reported<sup>21</sup>. Furthermore, in order to pass through the region duty-free, traders must register themselves in accordance with the regulations of the country of origin and it is pointed out that due to complexity of the registration procedure, which takes 4-6 months, development of regional trade has been inhibited<sup>22</sup>.

CET will be adopted once the domestic procedures of the member states are completed from 2015 onwards. There are five tariff bands to CET ranging from 0% to 35%. The highest band includes 130 goods considered sensitive by the ECOWAS states<sup>23</sup> such as meat (beef, pork, poultry), yoghurt, bird's eggs, vegetable oil, onions, potatoes, chocolate and cocoa powder. Only Nigeria has fully introduced CET and Ghana will introduce it in 2016<sup>24</sup>.

On trade, ECOWAS has completed the Economic Partnership Agreement with the EU in 2014. As a result, while all exports from the ECOWAS states will be duty free immediately upon the effective date, 75% of the imports will be reduced in a phased manner over the next 20 years. The sensitive goods defined by ECOWAS are not part of the agreement. Therefore, the Common External Tariff of 35% will be applied to the said goods<sup>25</sup>.

#### Relations of Ghana and ECOWAS

The trade between Ghana and ECOWAS is insignificant. In 2013, it was only 7.3% against the entire trade value in Ghana, and almost decreased by half compared to 13.8% ten years ago. Its largest importing

<sup>20</sup> Kalilou Traore, ECOWAS Commission "Overview of the Role of the Private Sector", 1<sup>st</sup> ECOWAS-JAPAN Business Forum, Oct. 2015.

<sup>21</sup> <http://www.oecd.org/aidfortrade/47479759.pdf>

<sup>22</sup> [https://www.wto.org/english/tratop\\_e/tpr\\_e/s298\\_e.pdf](https://www.wto.org/english/tratop_e/tpr_e/s298_e.pdf)

<sup>23</sup> USDA Gain, 2014, "Nigeria to Adopt ECOWAS Common Tariff"

[http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Nigeria%20to%20Adopt%20ECOWAS%20Common%20Tariff%20-%20January%202015\\_Lagos\\_Nigeria\\_12-16-2014.pdf](http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Nigeria%20to%20Adopt%20ECOWAS%20Common%20Tariff%20-%20January%202015_Lagos_Nigeria_12-16-2014.pdf)

<sup>24</sup> 同上

<sup>25</sup> EC, 2015 "Economic Partnership Agreement with West Africa- Facts and Figures--"

[http://trade.ec.europa.eu/doclib/docs/2014/july/tradoc\\_152694.pdf](http://trade.ec.europa.eu/doclib/docs/2014/july/tradoc_152694.pdf)

partner is Nigeria and exporting partner is Burkina Faso.

In order to promote trade within the region, the government of Ghana has opened the Border Information Centre on the borders between Ghana and Cote d'Ivoire, Burkina Faso and Togo to provide information to traders and assist them on procedures<sup>26</sup>. The neighbouring countries are also interested in imports and exports of goods from the ports of Tema and Takoradi in Ghana. Trader organizations in Burkina Faso and Niger opened offices in the port of Tema in the late 1990s to accelerate management and handling of transport and distribution from Tema port<sup>27</sup>.

Ghanaian trade with landlocked countries through Tema is mainly imports. Goods exported from the inland countries to Ghana served to satisfy domestic demand (especially livestock, onions, cotton lint and seeds). Roads are relatively well-established but customs clearance and roadblocks are the main factors preventing further development of transport and distribution<sup>28</sup>. ECOWAS has a plan to construct a Joint Border Post (JBP) or a One-Stop Border Post (OSBP) to improve customs at borders. One JBP site will handle customs and cross-border procedures for two countries, and is expected to guard the borders in a coordinated manner. This will reduce the time spent for customs by 3 hours on average and crossing the border by bus is expected to be easy. Today, the Joint Border Posts are being constructed in 3 places (borders between Nigeria and Benin, Togo and Ghana, and Benin and Niger).

**Table 7 Trends in Ghana-ECOWAS Trade**

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<b>Total trade value</b>	5,534	6,328	7,938	8,943	10,812	12,346	11,535	13,291	30,749	29,339	25,431
<b>ECOWAS</b>	762	585	1,110	1,185	1,085	1,281	918	686	7,226	2,635	1,865
<b>(%)</b>	13.8	9.2	14.0	13.3	10.0	10.4	8.0	5.2	23.5	9.0	7.3

Source) ITC Trade Map

### **The West African Economic and Monetary Union (UEMOA)**

UEMOA is a monetary union consisting of 8 Western African countries that have French as a common language (Guinea-Bissau, Ivory Coast, Senegal, Togo, Niger, Burkina Faso, Benin and Mali). Within UEMOA, the CFA Franc is the common currency issued by the West African States Central Bank (BCEAO). CFA Franc is linked with the Euro on a fixed rate of 655.975 CFA Franc per Euro. While UEMOA has the same programs as ECOWAS, such as regional trade liberalization and CET, full liberalization has not yet been achieved due to procedure problems at the customs point etc.

In order to achieve modernization and capacity building of the customs systems, the Japanese government had a formal dialogue with UEMOA at the 2012 TICAD IV and discussed cooperation in the area of establishing a One-Stop Border Post (OSBP). To facilitate this effort, JICA has since installed border facilities and equipment, supported modernization of legal frameworks and procedures as well as capacity building of customs officials and forwarders<sup>29</sup>.

In West Africa, cooperation between ECOWAS and UEMOA is progressing going beyond currency and language.

<sup>26</sup> WTO, 2014, "Trade Policy Review Ghana" [https://www.wto.org/english/tratop\\_e/tpr\\_e/s298\\_e.pdf](https://www.wto.org/english/tratop_e/tpr_e/s298_e.pdf)

<sup>27</sup> Centre for Development Research, 2001, "The Freight Transport and Logistical System of Ghana" [http://www.vilorio.com/Export\\_Ghana.pdf](http://www.vilorio.com/Export_Ghana.pdf)

<sup>28</sup> Same as above

<sup>29</sup> [http://www.jica.go.jp/topics/news/2013/20130726\\_01.html](http://www.jica.go.jp/topics/news/2013/20130726_01.html)



## 1.2.4 Investing in Ghana: Incentives, Benefits and Risks

### Favourable Foreign Investment Policy

Close to the largest port in Ghana, Tema, there is 480-hectare Free Zone. As an export hub site, it is connected to the airport by road and stable electricity supply is provided by a dedicated power grid. In addition, the Free Zone Act introduced in 1995 requires no permission for imports into the Free Zones and exempts import and export taxes as well as corporate tax for 10 years. Free Zones are also located in Sekondi, Shama and Ashanti in addition to Tema, where 299 corporations operate businesses. In the area of agriculture, foreign businesses such as Barry, Nestle and Cargill have entered the Free Zones, mainly exporting processed goods using cocoa products and fruits<sup>30</sup>. Businesses are required to export over 70% of the products manufactured in order to use the Free Zone. Therefore, up to 30% of manufactured goods may be sold in the country.

The government of Ghana provides various favourable treatments to drive investments in agriculture. Imports of materials and equipment used at agricultural processing plants are duty free, and reduced corporate taxes are applied to the manufacturers of processed food made from domestic agricultural products. In particular, to promote businesses in the communities, construction of buildings other than in Accra and Tema offers higher favourable treatment rate and zero corporate tax is applied to construction of facilities in the northern regions (usually 25%)<sup>31</sup>. Free movements of capital, profits and dividends are ensured to protect investors.

### Foreign Investment Regulations

The Ghana Investment Promotion Centre Act revised in 2013 does not permit a person who is not a citizen of Ghana or an enterprise which is not wholly owned by citizen of Ghana to invest or participate in eight areas such as hawking or the sale of goods in a market or selling of goods in a stall or the retail of finished pharmaceutical products<sup>32</sup>. In other areas the act stipulates regulations on capital and duty to employ domestic workers accordingly. Foreign-invested traders that are engaged in the retail of imported goods or services are obliged to invest at least one million US dollars and employ 20 or more Ghanaians.

The Constitution of Ghana prohibits non-citizens from owning land. However, they can lease for up to 50 years. The risks of owning and leasing the land are explained in the next clause.

### Benefits and Risks of Foreign Investments

Ghana is considered to have a good investment environment in West Africa due to its political and economic stability with well-established legislation. According to the Doing Business Report issued by the World Bank, while Ghana ranks higher than other West African countries, there are items that have deteriorated compared to 10 years ago. In particular, while loan access, which was one of the challenges of the country, has improved significantly, the import and export cost for trans-border trade has been soaring, which pushed down Ghana's ranking<sup>33</sup>.

<sup>30</sup> Ghana Free Zones Board ([www.gfzb.gov.gh](http://www.gfzb.gov.gh))

<sup>31</sup> Ghana Investment Promotion Centre

(<http://www.gipcghana.com/invest-in-ghana/why-ghana/tax-regime-and-incentives.html>)

<sup>32</sup> Republic of Ghana "Ghana Investment Promotion Center Act, 2013" (Act 865)

<http://www.gipcghana.com/images/docs/laws/GIPC%20Act%202013.pdf>

<sup>33</sup> WTO, 2014, "Trade Policy Review Ghana" [https://www.wto.org/english/tratop\\_e/tpr\\_e/s298\\_e.pdf](https://www.wto.org/english/tratop_e/tpr_e/s298_e.pdf)

**Table 8 Ghana and Neighbouring Countries' Business Environment Ranking (2007 and 2016)**

	ガーナ		カメルーン		コートジボワール		トーゴ		ベニン		ナイジェリア	
	2007	2016	2007	2016	2007	2016	2007	2016	2007	2016	2007	2016
<b>Ease of doing business (rank)</b>	94	<b>114</b>	152	172	141	142	151	150	137	158	108	169
<b>Starting a business</b>												
<b>Rank</b>	145	<b>102</b>	152	137	154	46	169	133	126	115	118	139
<b>Cost<sup>(a)</sup></b>	47.2	<b>19.4</b>	151.0	32.7	134.0	18.6	253.0	77.8	211.0	45.3	52.0	31.7
<b>Number of days</b>	18	<b>14</b>	45	15	45	7	64	10	31	12	35	31
<b>Trading across borders</b>												
<b>Rank</b>	61	<b>171</b>	140	185	132	142	64	126	130	116	137	182
<b>Number of export documents<sup>(b)</sup></b>	6	-	9	-	9	-	6	-	7	-	9	-
<b>Time to export (days)<sup>(b)</sup></b>	21	<b>200(hr)</b>	27	273(hr)	23	234(hr)	24	44(hr)	34	132(hr)	26	317.9(hr)
<b>Cost to export<sup>(b)</sup></b>	624	<b>1,132</b>	1,032	1,572	1,744	632	872	553	965	645	1,026	1,712.9
<b>Documents to import (number)<sup>(b)</sup></b>	7	-	9	-	10	-	7	-	8	-	13	-
<b>Time to import (days)<sup>(b)</sup></b>	50	<b>568(hr)</b>	33	439(hr)	43	218(hr)	29	461(hr)	38	133(hr)	46	497.5(hr)
<b>Cost to import<sup>(b)</sup></b>	842	<b>1,507</b>	1,918	2,539	2,457	929	1,040	1,353	1,222	1,369	1,047	2,318.3
<b>Getting credit</b>	117	<b>42</b>	117	126	143	133	143	133	117	133	83	59
<b>Registering property</b>												
<b>Rank</b>	49	<b>77</b>	159	175	127	109	155	182	85	172	170	181
<b>Number of procedures</b>	6	<b>5</b>	5	5	6	6	5	5	4	4	13	12
<b>Cost<sup>(a)</sup></b>	1.7	<b>1.1</b>	18.9	18.9	14.0	7.5	13.9	9.2	15.9	11.7	212.0	10.5
<b>Access to electricity</b>	-	<b>121</b>	-	113	-	146	-	109	-	179	-	182
<b>Cost<sup>(a)</sup></b>	-	<b>1,530.6</b>	-	1,582.9	-	2,583.9	-	5,705.1	-	14,287.3	-	437.7
<b>Electric bill (US cent/kWh)</b>	-	<b>25.4</b>	-	21.8	-	12.6	-	21.7	-	23.1	-	26.7

<sup>(a)</sup> Percentage of income per capita

<sup>(b)</sup> The evaluation method has been changed since the 2015 version and simple comparison cannot be made.

Source) WTO, Trade Policy Review of Ghana, 2014.

On the other hand, there are challenges that may become risks to foreign investors. Especially the two cross-sectoral issues below:

### **Risk 1 Instable Electricity**

One of the greatest challenges mentioned in the investment environment in Ghana is its unstable electricity supply. Many challenges remain not only in power supply but also in unstable voltage. Since less stable voltage will damage materials and equipment, it is quite an issue for processors. It is said that the economic loss brought from the electricity issue is equivalent to 5.6% of the GDP<sup>34</sup>. While electricity in the Free Zones such as Tema is supplied via a separate network and thus is not impacted, metropolitan cities

<sup>34</sup> USAID, "Partnership for Growth Ghana 2012-2016", Feb. 2013.

including the capital Accra face more hours without electricity than with electricity in a day. In addition, electricity is not supplied in 65% of the northern areas and regional gaps from inconsistent infrastructure development are seen.

Today, though many enterprises and manufacturers use private electricity generators on diesel to address the power issue, high fuel cost heavily impacts their production costs.

## **Risk 2 Owning and Leasing Land**

The Constitution of Ghana prohibits non-citizens from owning land. In order for them to use land, they may lease the land for up to 50 years. For further efficient use of land, the government plans to develop a framework to loan a certain size of land by acting as a bridge between small-sized landowners and foreign investors. Also under discussion is including a land bank in the same framework to provide information on soil, infrastructure preparation and water quality to investors

In Ghana, 80% of the land falls within the area of customary land belonging to the clan, tribe or community<sup>35</sup>. This trend is strongly seen in the north of Ashanti and Volta Region in the west where vast farmland is seen and the land is subdivided. This requires investors to make a huge effort to lease and use the farmland.

### **1.2.5 Japan's Economic Aid Related to the FVC**

Assistance for Ghana by the government of Japan has been developed based on the government of Ghana's medium term national development plan under the aid policy of "Promoting Dynamic Economic Growth that Benefits the People Widely". Agriculture (rice) and economic infrastructure (electricity and transport) are the focus areas. Concrete projects include sustainable development of rain-fed rice production, support for agriculture mechanisation for small-scale farmers and enhancing agri-business capacity for agricultural investments by private sectors. In particular, numerous types of support to upgrade rice productivity including capability development and irrigation project are being provided.

#### **Rice**

At the IV Tokyo International Conference on African Development (TICAD IV) in 2008, the Coalition for African Rice Development (CARD) initiative was developed, aiming at doubling African rice production within ten years. In the form of the policy objectives under CARD, the Ministry of Food and Agriculture in Ghana has developed the National Rice Development Strategy which covers the period 2008 to 2018, aiming at increasing the rice production 4.3 times by 2018 compared to 2008.

Between 2005 and 2008 JICA executed the Total Rice Production and Sales Plan Study to identify issues in rice production in Ghana and to develop a master plan to promote domestic rice production. Based on the plan, Sustainable Development of Rain-fed Lowland Rice Production Project was initiated in the Ashanti Region, in the middle of Ghana, and the Northern Region, in northern Ghana between 2009 and 2014. In this project, support for the development of a technical manual and improvement of sales capability and marketing skills for higher productivity and profitability of rain-fed rice production in the said areas were provided. As a result of this activity, the Diffusion Guideline summarizing such know-how was

<sup>35</sup> Mahama et al, 2009 "Management of Stool Land Revenue in Ghana: A Study of The Nkawie and Toase Stools of the Atwima Nwabiagya District of the Ashanti Region"  
<http://ir.knust.edu.gh/bitstream/123456789/5191/1/C.A.%20Mahama%20and%20O.A.%20Barfour.pdf>

compiled. Today, the initiative is rolled out in 35 counties and prepared for Phase II.

In the projects for Strengthening the Capacity of the Agribusiness Support Division to Facilitate Private Sector Investment and Small Farm Mechanization Promotion, mid- to long term plans were developed and projects have been conducted to support capability from production to distribution of rice. Furthermore, projects to improve smallholder farmer market-oriented agriculture and to enhance private sector alliances have been implemented since 2015 through the Kpong Irrigation Scheme by JICA, together with the Ghana Irrigation Development Authority. Through these projects, improvement in the productivity and profitability of rice cultivation in the Kpong Irrigation Scheme in western Ghana is expected, through better water management as well as agricultural management capabilities.

## **Cacao**

In addition to gold, cacao has been one of the traditional export items of Ghana. Today, support to cacao has been focused on improvement of the quality management capability. Since the introduction of the Positive List System for Agricultural Chemical Residues in Food in Japan in 2006, 30% of the cacao beans exported from Ghana were found to have excessive pesticide residues and because of this, Japanese experts were sent to the Ghana Cocoa Board from 2014 under the Capacity Building Programme on Pesticide Residues in Cocoa to support improvement of Ghana's quality management capacity.

## **Logistics Infrastructure**

The Master Plan Development Project began in 2015 in West Africa, including Ghana, to maintain and improve the regional distribution and logistics infrastructure. Aid for improvement of transport corridors from the Ghanaian coast to the north part of the country or to Burkina Faso and Niger has been provided. In the Detailed Design Survey on a New Bridge across the Volta River on the Eastern Corridor Project started in 2014, maintenance and improvement of the road from the Port of Tema to the landlocked countries via eastern area without going through a heavy-traffic city Kumasi is planned.

Reconstruction of the Trunk Road No.8 connecting central Kumasi and coastal Yamoransa was conducted between 2009 and 2014. Yamoransa is located on the trunk road connecting the Port of Takoradi and Accra thus the physical distribution between Takoradi and inland regions is expected to be smoother. This initiative included improvement of some 60km road where conditions had been particularly poor.

## **Agricultural Machinery**

As part of Japan's Grant Assistance for Underprivileged Farmers (2KR), tractors in particular, but also rice hullers, irrigation pumps, threshers and harvesters have been provided to the government of Ghana. The main target crop is rice and the Japanese-made rice milling machinery in particular has been well received for its high quality. On the other hand, machinery such as tractors provided in the past have been criticised for their difficulty to repair due to the scarce availability of the appropriate spare parts<sup>36</sup>.

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<sup>36</sup> Preliminary Study Report on the Food Security Project for Underprivileged farmers (2KR) in Ghana by JICA, 2012



## 2 FOOD VALUE CHAINS AND THE GHANAIAN RETAIL MARKET

Agriculture in Ghana relies on rainwater, which causes production instability. As the urban population increases, modern retail businesses have expanded and in order to secure a stable level of supply, food imports such as rice have rapidly increased. Meanwhile, domestic processing markets are still immature and raw materials, as well as the equipment required, rely on imports. The food-service industry has developed as shopping malls in urban areas expand; however, this industry is still at an initial phase. This chapter illustrates the overall picture of the FVC in Ghana ranging from agriculture, livestock and fisheries industries to consumer markets as well as summarises the major players in the FVC and the government policies related to the FVC.

### 2.1 Supply and Demand of Food, and Agriculture, Livestock and Fisheries Industries of Ghana

#### 2.1.1 Domestic Food Demand and Supply

Out of the total population of 27.4 million in Ghana, 54% live in urban areas and 46% in farming villages. The share of urban population in Ghana is relatively high in West Africa. Urbanization is accelerating and is growing at 1.3% a year. Compared to the Sub-Saharan African average, Ghana's nutritional status is good, with a daily calorie intake of 3,000kcal per person in 2011 which is around the same level as South Africa. Although the food insecure population in Ghana of 5.6% (average between 2010-2012) is lower than the average of 23% in Sub-Saharan Africa, improvement of malnutrition mainly among infants is a challenge<sup>37</sup>.

The main staple foods in Ghana are potatoes (cassava and yam), grain (rice, maize and wheat), and plantains (cooking banana; Ghanaians get 40% of calories from potatoes, 26% from grain and 10% from plantains. Among grain supply, rice is the highest at 40%, followed by maize at 28% and wheat at 13%. Ghana is mostly self-sufficient in potatoes and maize, thus exports and imports are rarely seen; however, rice and wheat supply heavily relies on imports. 60% of rice and 100% of wheat are, in fact, imported.

Sugar cane production is scarce in Ghana. While almost 100% of the sugar supply relies on imports, the country processes half of such sugar domestically and exports the rest. In the oilseeds category, Ghana produces peanuts and coconuts. In order to meet the strong domestic demand, Ghana imports around one third of such oilseeds and domestically processes part of them to export to third countries.

In the category of vegetables, demand for tomatoes is particularly high. Since production is not keeping up with the demand, about half of the supply is imported from neighbouring countries and a large amount of processed food such as canned tomatoes are imported from Europe. Ghana also exports some fruits and vegetables to Europe, such as pineapples, citrus and bananas; however, import bans are often imposed

<sup>37</sup> All statistical data are from FAO STAT

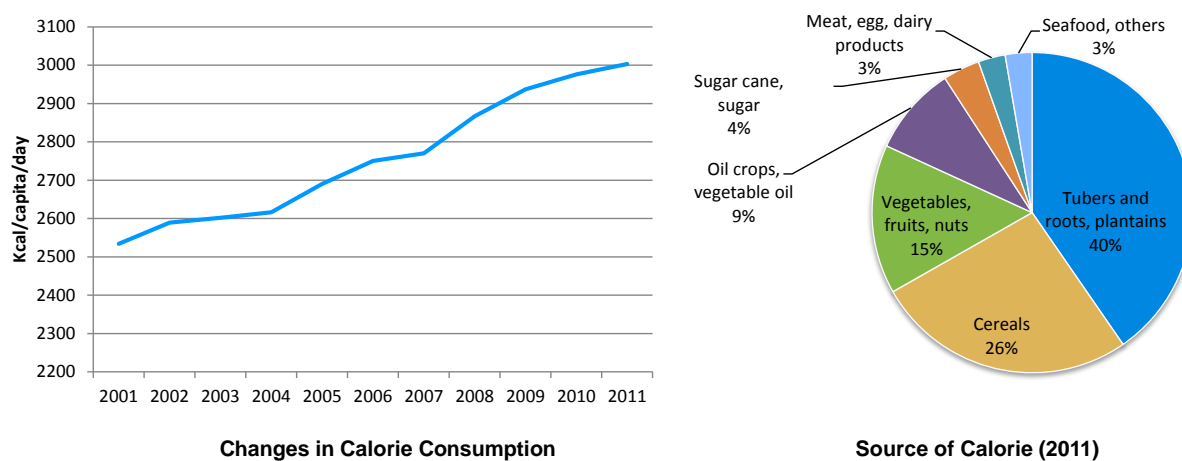
when the products do not meet the quality criteria of the EU.

In Ghana, meat and seafood are equally important sources of animal proteins and both of them heavily rely on imports. Livestock farming is less developed and the country depends on imports for some 40% of the meat supply and 90% of the milk supply. Although there are some inland water fisheries, around 60% relies on imports.

**Table 9 Ghana's Food Balance Sheet (2011)**

	Supply ('000 ton)					Demand ('000 ton)						Per capita consumption	
	Production	Imports	Stock Variation	Production	Imports	Stock Variation	Production	Imports	Stock Variation	Production	Imports	Stock Variation	Production
Rice	309	558	45	0	912	849	1		7	56	0	34	323
Maize	1,684	13	0	1	1,697	634		763	31	267	1	26	222
Wheat		475	0	6	469	462				8	0	19	139
Other cereals	471	39	0	1	509	332	94	1	4	77	0	13	107
Cassava	14,241	1	0	6	14,236	6,099		3,096		4,295	746	246	708
Yam	6,295		0	10	6,286	3,686				1,000	1,600	149	407
Other potatoes	1,430	8	0	4	1,434	1,017	0	0	0	420	1	41	97
Plantains	3,620			0	3,619	3,257				362		131	320
Sugar cane	145			0	145	133	0		4	7	0	5	4
Sugar* Sweetener	0	522	0	245	277	275					2	11	108
Pulse	24	26	0	0	50	45			4	1		2	17
Oilseeds	750	18	5	39	734	289	329	15	20	70	12	12	113
Vegetable oil	289	109	15	118	294	163	0				130	7	157
Nuts	61	5	105	147	24	23				1		1	9
Tomato	321	315		5	631	598				33		24	15
Onion	120	75		3	193	173				20		7	7
Other vegetables	231	8	0	2	238	219				19		9	7
Orange* Mandarin	600	8	8	21	595	535				60		22	18
Other fruits	384	220	2	91	515	482	0	0	0	35	0	19	12
Cocoa	700	5	200	725	180	124					56	5	15
Spices	91	1	0	0	92	89				3		4	31
Coffee* Tea	1	4	0	2	4	4	0	0	0	0	0	0	0
Alcohol	439	71		2	508	461					47	19	20
Meat	238	182		0	419	419					0	17	54
Variety meat	12	25			37	37						1	4
Animal fat	3	5	0	0	8	7					1	0	5
Egg	40	0		0	40	30			8	2		1	4
Milk	39	205	0	7	237	234				2	0	9	15
Fresh water fish	114	1	0	0	115	115					0	5	9
Other seafood	239	418	0	31	625	561	0	64	0	0	0	23	52

Source) FAO

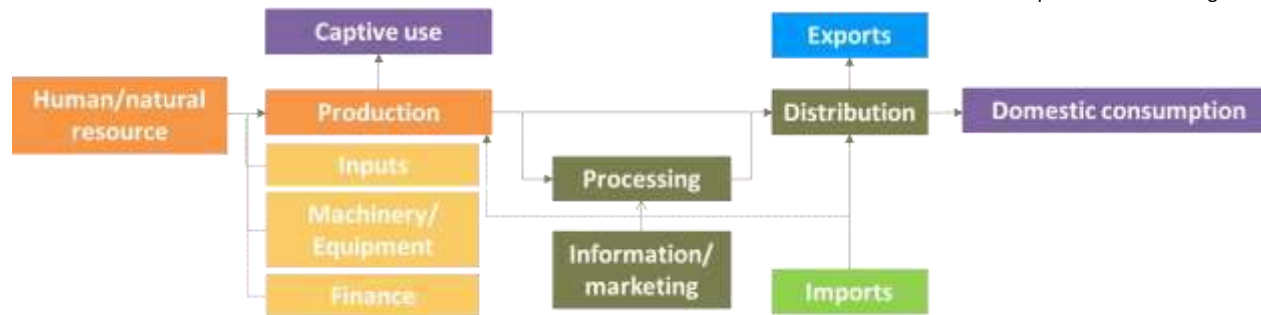
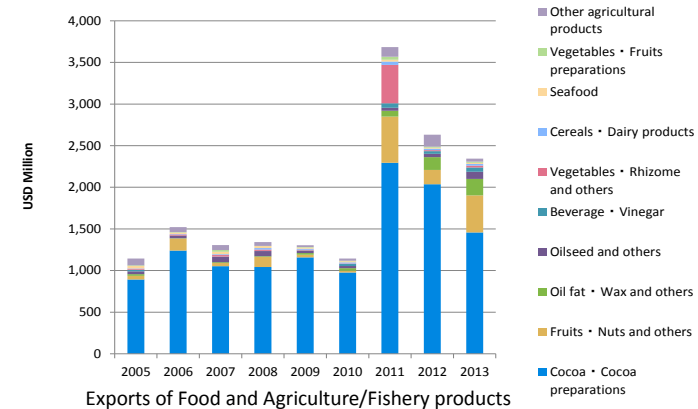


**Figure 9 Ghana's Changes in Calorie Consumption and Calorie Sources**

Source) FAOSTAT

X

<u>Export</u>	<u>'000t</u>
Oil crops	10,823
Oil/wax	3,285
Cocoa/cocoa products	558
Fruits/nuts	238
Vegetables/roots	47
Cereal flour	26



#### Domestic food consumption '000t

Cereals	2,277
Potato	10,802
Sugar cane/sugar	408
Oil crops/veg oil	452
Pulses	45
Vegetables/fruits/nuts	5,287
Coffee/tea/spice	217
Alcohol	461
Milk	234
Meat/egg	449
Seafood	675

<u>Production</u>	<u>'000t</u>
Cereals	2,464
Potato	21,966
Sugar cane	145
Oil crops	750
Pulses	24
Vegetables/fruits/nuts	5,337
Alcohol	439
Milk	39
Meat/egg	278
Seafood	353

<u>Import</u>	<u>'000t</u>
Cereals	2,939
Sugar/sweetener	854
Seafood	483
Meat/offal	218
Oil/wax	1,014
Drinks/vinegar	789

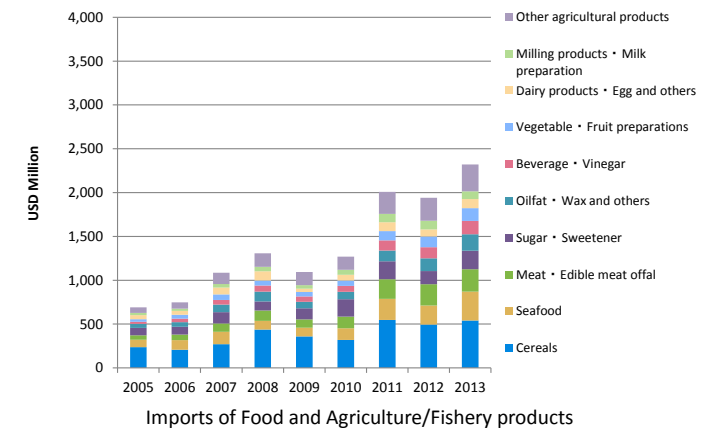


Figure 10 Food Map of Ghana (2013)

Source) ITC Trade Map, FAOSTAT (2011) \*Domestic food consumption data is for 2011

## **2.1.2 Trade in Farm and Marine Products and Related Markets**

### **Exports**

Agricultural and marine products consist of one third of the total export value of Ghana. In 2014, out of 3.9 billion US dollars' worth of exports, 78% were cacao, 8% were edible fruits and nuts, 4% were meat and fish mixed products, 4% were animal and plant fat and 1% was fish.

The volume of cacao exports grew 1.3 times over the 10 years from 2003 to 2013. In particular, production increased due to a hike in demand hike during the instable political situation in Cote d'Ivoire in 2011 and supply also increased due to smuggling from neighbouring countries, which boosted the total volume of 'Ghanaian cacao'. Also, the recent increase in the international cacao price has grown the export value to 1.8 times higher than 10 years ago. Cacao beans are the most popular form of cacao export, which consists over 90% of the total amount. The beans are exported mainly to Western countries such the Netherlands, the United States and Belgium with a recent increase to Malaysia. Among the processed cacao foods, cacao paste is the most popular product for export. Even though the export volume is 200,000 tons, which is less than cacao beans, it has doubled over the 10 years, with around a 30% premium export price per unit.

The second largest volume of exported goods after cacao are edible fruit and nuts. Both of them have grown significantly in recent years and the export value in 2014 was 300 million US dollars, 7 times higher than 10 years ago. In particular, export of cashew nuts is the largest, followed by bananas, pineapples and oranges. Export volume of cashew nuts has increased dramatically over the past 10 years, recording 140,000 tons in 2014, which was 23 times higher than 10 years ago. The main export partners are India and Vietnam, which take 80% of the total exports of cashew nuts from Ghana. Fish products (tuna and bonito) and palm oil are exported to Western countries and the neighbouring states.

### **Imports**

Agriculture and marine products consist of 15% of the total imports into Ghana, mainly grain, animal and vegetable oil, sugar and beverages (including alcohol). Grain composes 20% of the total amount followed by the remaining four items at 12%, 10%, 9% and 9% respectively. Rice has the highest import volume among grain products, recording 640,000 tons in 2014. Especially in the most recent three years, more than 50,000 tons of rice has been imported every year, mainly from Vietnam, Thailand and the US. In 2014, Ghana's rice import value was 400 million US dollars, 3.6 times higher than 10 years ago.

The second largest import item after rice is wheat. In 2013, 185,000 tons of wheat were imported, out of which half was from Canada. Since wheat is not produced domestically, Ghana's entire supply depends on imports.

In recent years, an increase in imports of palm oil has been observed. In 2013, 136,000 tons of palm oil was imported, mainly from Indonesia and Malaysia. Vegetable oils are produced in Ghana and the majority of the imported oils are unrefined vegetable oils for processing businesses. Likewise, out of 190,000 tons of sugar imported in 2014, 70% was refined sugar and the rest was raw sugar that was then processed domestically in Ghana. The main importing partners for sugar are Brazil and Thailand.

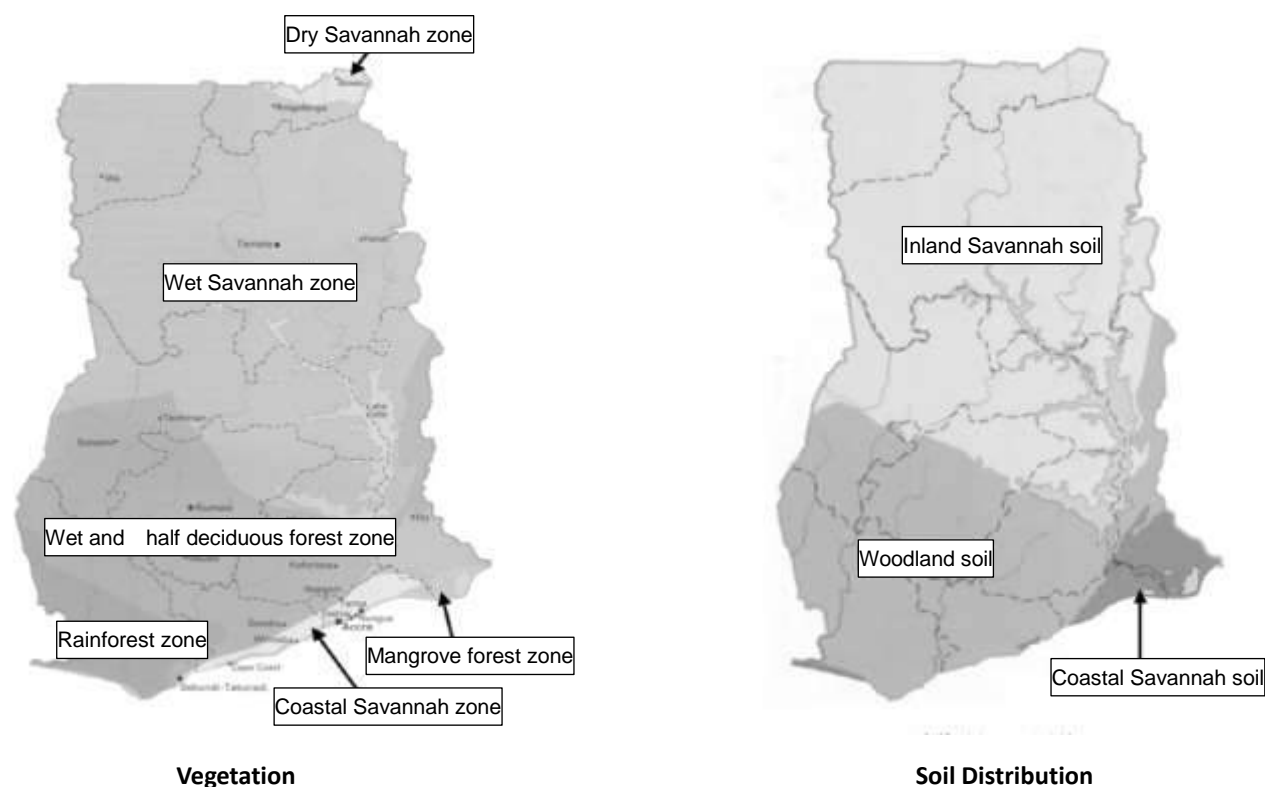
Imports of poultry and other meat doubled over the 10 years since 2003, recording 185,000 tons in 2014. Poultry is 76% of the total amount of imports in this category, mainly from the US, Brazil and Belgium.

### 2.1.3 Agriculture, Fisheries and Food Processing Industries

#### Availability and Distribution of Farmland

Out of the total land area of Ghana, measuring 22.75 million hectares, 70% or 15.7 million hectares are farmland. However, around half of such farmland is rangeland and 47% of the farmland or 7.4 million hectares is used for cultivated fields and perennial crops.

The climate of Ghana, which is about the two third of the size of Japan, is largely divided into tropical wet climate and savanna climate with alternate wet and dry seasons twice each a year. There is a major season and a minor season to each wet and dry season. It is warm and dry along east coast, hot and humid in southwest, and hot and dry in north. Ghana is divided into six agro-ecological zones determined by the rainfall and climate: these are rainforest in the west such as Takoradi, semi deciduous forest in the midland, temperate savanna from the midland to north, mangrove in the south of Volta, dry savanna in the north easternmost and coastal savanna along the coast. By climate and edaphic factors, types of soil are also largely divided into forest (from west to midland), inland savanna (from midland to north) and coastal savanna (from midland coast to east)<sup>38</sup>.



**Figure 11 Vegetation and soil distribution map**

Source) JAICAF

<sup>38</sup> *Agriculture and Forestry in Ghana* by JAICAF in 2007

## Agricultural Scale

The scale of agriculture in Ghana is small on average and around 90% of farmers own farms of less than two hectares. Large scale plantations exist for crops like gum trees, oil palms and coconuts and relatively large fields exist for rice cultivation. Crops are usually rotated between dry and wet seasons and growing a single crop is often the case for large-scale farms<sup>39</sup>.

The irrigation rate is significantly low. According to Ghana's Ministry of Food and Agriculture the irrigated area was 30,345 hectares in 2012, which accounts for only 0.4% of the total farmland and perennial crop cultivation areas<sup>40</sup>. Out of which, 60% is simple irrigation called informal irrigation, led by small-scale producers, which is different from the irrigation projects led by the government and other authorities<sup>41</sup>. Today, rain-fed agriculture is the majority and the yield remains low. Yields of the staple food in Ghana such as maize, rice and yam is about one third of the attainable yields estimated by the Crops Research Institute, showing a possibility for a dramatic increase with introduction of the proper agricultural technology.

**Table 10 Land Usage**

	Unit: Thousand ha
Country area	23,854
Land area	22,754
Farm area	15,700
Cultivated • Perennial crop	7,400
Cultivated	4,700
Perennial crop	2,700
Pasture area	8,300
Irrigation area	34
Forest area	9,280
Inland waters	1,100

Source) FAOSTAT

**Table 11 Average Yield by crop (2012)**

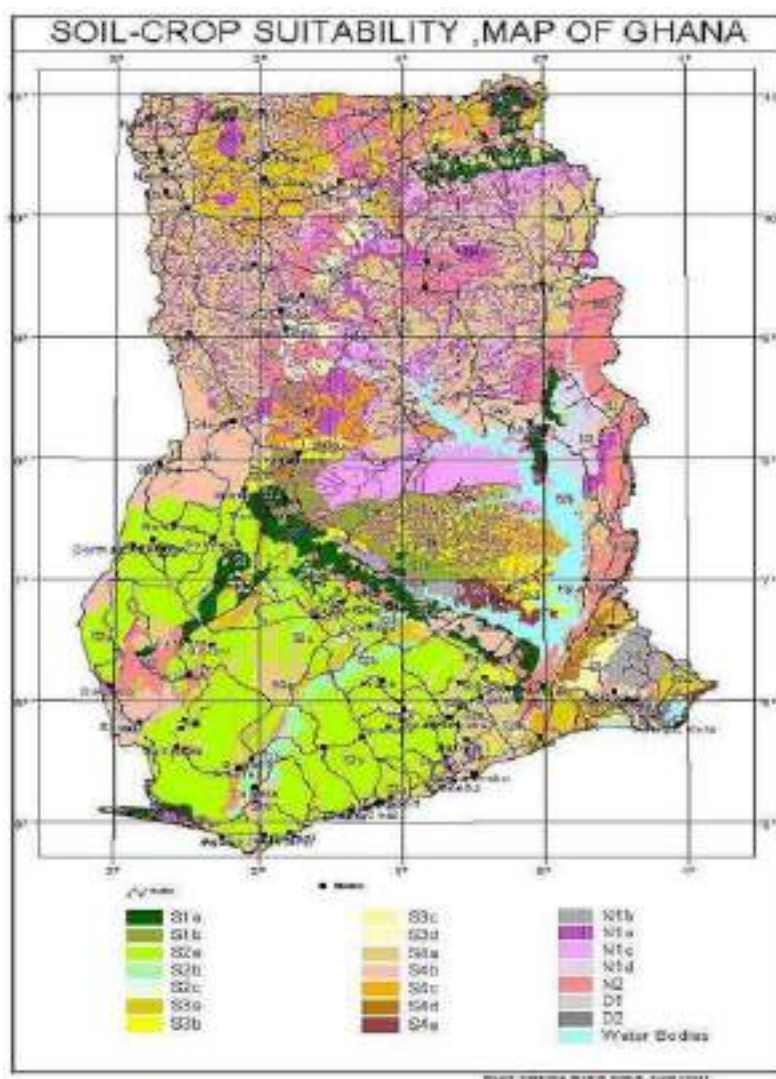
Crops	Average yield (MT/Ha)	Reachable yield (MT/Ha)	Current %
Cassava	16.8	48.7	34.5
Plantain	10.5	20.0	52.5
Yam	15.6	49.0	31.8
Maize	1.9	6.0	31.7
Rice	2.5	6.5	38.5
Cocoa	0.4	1.0	40.0
Cashew nuts	0.4	1.8	22.2
Pineapple	60	72.0	83.3
Tomato	7.2	15.0	48.0
Pepper	8.0	32.3	24.8

Source) MOFA

<sup>39</sup> Ministry of Food and Agriculture, "Agriculture in Ghana, Facts and Figures (2012)", August 2013.

<sup>40</sup> Ministry of Food and Agriculture, "Agriculture in Ghana, Facts and Figures (2012)", August 2013

<sup>41</sup> [http://www.gida.gov.gh/Downloads/NATIONAL\\_IRRIGATION\\_POLICY\\_DOCUMENT.pdf](http://www.gida.gov.gh/Downloads/NATIONAL_IRRIGATION_POLICY_DOCUMENT.pdf)



**Figure 12 Soil-Crop Suitability**

Category	Characteristics	Category	Characteristics
<b>S1</b>	Highly suitable areas for extensive mechanized cultivation of export and food crops,	<b>S4</b>	Fairly to marginally suitable areas for the cultivation of crops.
<b>S1a</b>	Highly suitable soils, non-gravelly medium to moderately heavy textured. Suitable for cocoa, coffee, black pepper, sweet berry, ginger, citrus, cocoyam, banana, rice, sugarcane and vegetables.	<b>S4a</b>	Consist of gravelly, moderately shallow to shallow, imperfectly drained soils. Limited to hand cultivation of cassava, citrus, palm oil and mangoes. Soils may occur on upland or undulating of very steep slopes. Problem of soil erosion is predominant.
<b>S1b</b>	Have same characteristics as S1a above, but are situated in Savanna-transition vegetation zone. These areas are suitable for soybean, maize, yams, guinea corn, millet and groundnuts.	<b>S4b</b>	Soil may be imperfectly drained sands to loamy sands developed over beach sand or may have clay pan beneath the topsoil. Sandy areas may be used for groundnut and tiger nut cultivation.
<b>S2</b>	Suitable areas for extensive mechanical cultivation of export and food crops.	<b>S4d</b>	Soils are mainly loose sands developed on coastal sand dunes. Suitable for coconut cultivation. May be mixed with organic manure for vegetable cultivation as in Anloga areas.
<b>S2a</b>	Crop suitability same as S1. Limitation to crop production may be due to gravelly subsoil horizons.	<b>N1</b>	Unsuitable areas for upland arable and tree crops.
<b>S2b</b>	Crop suitability same as S2a above. Limitation to crop production may be due to either light or heavy textured soils.	<b>N1a</b>	Predominantly poor to very poorly drained soils, which may be developed for rice, sugarcane and vegetables.
<b>S3</b>	Fairly suitable areas for the cultivation of crops such as maize, cassava, vegetables etc.	<b>N1b</b>	Terrace derived alluvial soils, which are dominated by rounded pebbles rendering them unsuitable for



			mechanized agriculture. May be suitable for maize, cassava, and pepper cultivation.
<b>S3a</b>	May consist of heavy plastic clays mostly imperfectly to poorly drained soils good for mechanized irrigation of rice, sugarcane, vegetables, maize and millet.	<b>N1c</b>	Terrace derived soils, which contain surface pebbles and an undurated subsoil horizon. Soils may be left to prevailing grass vegetation for rough grazing of livestock.
<b>S3b</b>	Mostly alluvial soils suitable for maize, guinea corn and vegetables.	<b>N1d</b>	Soils dominated by ground water laterites rendering them imperfectly to poorly drain. May be developed for paddy rice cultivation or vegetation should be left for rough grazing by livestock.
<b>S3c</b>	Includes gravelly and moderately shallow soils. Could be hand cultivated for cassava, vegetables and maize.	<b>N2</b>	Very unsuitable areas for crop production. Soils are very shallow, gravelly, occurring on steep to very slopes. Should be reserved for forestry, wildlife and watershed protection.
		<b>D</b>	Very unsuitable areas for crop production. Soils are very saline and may be utilized for mining of edible salt.

Source) MOFA

## Agriculture

Agriculture occupies an important place in the economy of Ghana and composed one fifth of the GDP in 2014. In agriculture, cacao bean is the most critical crop, providing 13% of the agricultural GDP, and other crops share take an additional 60%. Livestock farming was 8% and fisheries 7%. In 2013, grain crops and cacao beans made up the majority of the production areas (1.6 million hectares each), followed by cassava and other potatoes (1.57 million hectares), palm oils and other oilseed crops (760,000 hectares), beans (430,000 hectares), fruits (410,000 hectares), vegetables (80,000 hectares), shea nuts (30,000 hectares).

## Livestock

In Ghana, around half of the meat production is game meat, highly dependent on bushmeat. In livestock, poultry farming has grown significantly and the production volume in 2013 was 50,000 tons, more than double that of beef. In 2012, there were 5.43 million goats, 4.02 million sheep, 1.54 million cattle, 600,000 tons of pigs and 57.89 million domestic poultry birds. Meat including poultry as well as dairy products are heavily import-dependent and imports have increased greatly to meet the boosting domestic needs.

## Fisheries

Though on a small scale, aquaculture and inshore fishery industries exist in Ghana. Even though the volume of aquaculture production is small, it has more than tripled compared to 4 years ago. Similar to meat, fish supply is import-dependent and the volume of imports has been slightly less than 200,000 tons a year<sup>42</sup>.

## Food Processing Industry

Manufacturing businesses in Ghana are relatively small compared to other areas, yet food and beverages are the largest categories in the manufacturing sector. According to the latest industrial statistics released by the government of Ghana, food and beverage categories consisted of 18% of the manufacturing sector on a value basis in 2003.

<sup>42</sup> Ministry of Food and Agriculture in Ghana

In the food processing industry, malt beverages and milling have the highest value-added prices, followed by dairy products and tobacco products. However, “value-added” often refers to manufacturing processes such as simple packaging or packing. Cacao processing usually refers to cacao powder or cacao butter and processed food like cooking oil or fruits, and juice production is also present. However, the common challenge across such manufacturing businesses is the stable supply of raw materials. Since agriculture in Ghana relies on rain-fed farming systems, volume and quality of production changes from year to year and causes a significant issue for processors. Also the electricity issue previously described pushes up the cost to install and run private electric generators fuelled by diesel, ultimately raising the production cost. For this reason, there is a strong tendency to import overseas raw materials that are stable in supply and quality. Equipment for processing as well as materials used for wrapping and packing are also difficult to procure domestically and in the majority of cases all of those items are imported from China. Furthermore, it has been pointed out that high interest rates on loans discourages manufactures to make new investments.

Cacao products processed for exports are able to avoid the electricity issue by leveraging the advantages of the Free Zone. Manufacturers for domestic distribution who sell processed food using imported raw materials are in a price war against the imported finished goods. In addition, since the majority of the modern wholesalers and retailers, such as large supermarket chains, import by themselves, it is a tough challenge for domestic processed food to penetrate into the local market.

**Table 12 Production of Main Agricultural Products**

	Production Area ('000 ha)			Production Volume ('000t)		
	2003	2008	2013	2003	2008	2013
<b>Tubers</b>	1,485	1,511	1,565	15,969	18,047	24,461
<b>Crops</b>	1,462	1,437	1,626	2,041	2,297	2,746
<b>Maize</b>	792	846	1,023	1,289	1,470	1,764
<b>Rice</b>	117	133	216	239	302	570
<b>Sorghum</b>	346	276	226	338	331	257
<b>Millet</b>	207	182	161	176	194	155
<b>Oil crops</b>	816	788	762	316	345	321
<b>Pulses</b>	370	446	430	158	202	231
<b>Cocoa bean</b>	1,500	1,823	1,600	497	681	835
<b>Shea nuts</b>	37	29	31	65	68	34
<b>Fruits</b>	364	371	408	2,859	4,146	5,334
<b>Vegetables</b>	153	90	82	591	552	745
<b>Sugar cane</b>	6	6	6	140	145	150
<b>Fibre crop</b>	19	15	16	7	5	6
<b>Gum</b>	20	25	27	9	17	21

Source) FAOSTAT

**Table 13 Production of Main Livestock Products**  
(‘000 ton)

	2003	2008	2013
Raw milk (Cow)	35	37	41
Meat	182	220	255
Beef	24	25	22
Mutton	10	16	19
Goat	12	14	22
Pork	10	17	21
Chicken	26	44	51
Others	99	104	119

Source) FAOSTAT

**Table 14 Seafood Production (‘000 ton)**

	2009	2010	2011	2012
Fishery	389	402	422	429
Ocean	318	319	327	334
Inland waters	71	83	95	95
Aquaculture	8	10	19	27

Source) MOFA

**Table 15 Activities of Food-related Companies (2003)**

	Number of employees	Salary	Added value
	People	Million Ghc	Million Ghc
<b>Total</b>	<b>22,958</b>	<b>381,960</b>	<b>2,909,692</b>
<b>Beverages • Tobacco</b>			
Malt beverage	1,501	35,431	606,875
Tobacco products	353	17,425	287,752
Refreshing drink	2,870	46,866	197,722
Alcohol	922	13,192	75,013
<b>Food</b>			
Milling	3,125	37,680	601,882
Dairy products	1,488	60,825	536,970
Fish preparations	2,771	39,412	201,781
Animal and vegetable oil	3,398	28,727	144,464
Cocoa • Chocolate preparations	1,316	50,450	87,245
Bakery	3,300	19,350	74,480
Fruits • Vegetable processed products	1,259	26,979	56,497
Fodder	120	368	21,349
Meat processed	318	2,743	16,008
Starch processed	104	1,561	-903
Other food processed	113	952	2,556

Source) National Industrial Census 2003

## 2.2 The Ghanaian Food and Distribution Sectors

### 2.2.1 Food Sector Size

According to a study by the African Development Bank in 2011, 20% of the citizens of Ghana are middle class (spending 4-20 US dollars a day) and 26.8% are the 'floating class', those that are below middle class but higher than the poverty line (spending 2-4 US dollars a day)<sup>43</sup>. In 2009, annual expenditure per capita was around 850 US dollars, out of which 41% was food and 1.5% was either alcoholic beverages or tobacco, leading to a calculation that the scale of domestic food and beverage markets is 8.17 billion US dollars and alcoholic beverage and tobacco markets 310 million US dollars<sup>44</sup>.

The history of the modern retail business, such as supermarkets, is still short and supermarkets were first introduced by a domestically funded company in the early 2000s. The number of supermarket outlets and shopping malls is still limited, mainly to urban areas such as Accra, Kumasi and Takoradi. According to a study by Nielsen in 2015, only 4% of Ghanaians shop at modern retailers, thus they are not competing with traditional markets at present. However, construction of supermarkets has expanded in recent years and not only domestic corporations but also major South African supermarkets have started operations in Ghana. A&C was the first shopping mall built in 2005, and today more malls are also under development and are expected to grow continuously, mainly in Accra.

One of the factors contributing to this trend is urbanization in Ghana, which exceeded 50% in 2009. Continued economic growth since the 2000s, improvement in income and the rate of car ownership<sup>45</sup>, and the increase in the Ghanaian population with overseas experience is also considered to be driving the rush to construct supermarkets and malls. Malls are particularly popular and the vacancy rate has been nil<sup>46</sup>. Together with the increase in malls, an expansion of the foreign fast food chains has also been observed recently.

One of the expected behavioural patterns of the urban population is the use of supermarkets, where a broad range of quality products are available. Today, the informal sectors comprise 96% of the total retail industry of Ghana. Advantages of the traditional retail industry are the availability of cheap and a wide variety of goods, convenience, availability of trade in small quantities and able to eat immediately<sup>47</sup>. In urban areas such as Accra, 32% of the food expenditure is for ready-to-eat foods, suggesting there is a high demand for food sold by street vendors<sup>48</sup>.

In the sections below, we will take a look at the food markets in Ghana from viewpoints of traditional and modern retail businesses.

<sup>43</sup> AfDB, "The middle of the pyramid: Dynamics of the middle class in Africa", April, 2011

<sup>44</sup> AfDB, "A comparison of real household consumption expenditures and price levels in Africa", 2012

<sup>45</sup> According to the African Development Bank, rate of owning a car/ bike has increased by 81% since 2006.

<sup>46</sup> CBRE, "The Broll Report 2014/2015", 2 014/2015

<sup>47</sup> [http://www.broll.com/assets/uploads/documents/2015/04/The\\_Broll\\_Report\\_2014-2015.pdf](http://www.broll.com/assets/uploads/documents/2015/04/The_Broll_Report_2014-2015.pdf)

<sup>48</sup> Meng et al., "Consumer's Food Shopping Choice in Ghana :Supermarket or Traditional Outlets?"

[http://www.ifama.org/files/IFAMR/Vol%2017/\(7\)%20Meng\\_20130041.pdf](http://www.ifama.org/files/IFAMR/Vol%2017/(7)%20Meng_20130041.pdf)

<sup>48</sup> Oltmans, "A case study on the food retail environment of Accra, Ghana", 2013

<http://lib.dr.iastate.edu/cgi/viewcontent.cgi?article=4641&context=etd>

## 2.2.2 Traditional Retail

The main traditional retail models for food in Ghana are open air markets and peddling. While vendors that have stores in a market need to pay electric bills and rents to the government, peddlers and certain mini markets are categorized as informal and do not pay tax. Although the government of Ghana tries to control such peddlers from the aspect of good hygiene, it has not reinforced the regulations since the informal sector is an important employer. According to the Ghana Statistical Service, 83.9% of the labour force was engaged in some aspect the informal sector in 2010 and a large number of people are considered to be engaged in food handling jobs such as peddling or mini markets<sup>4950</sup>.

One of the differences from the modern supermarkets is that they sell traditional foods and products of Ghana in an authentic way. For example, they sell chunks of dried cassava flour which can be dissolved in hot water and used to iron and starch clothing. Such traditional products are not seen in the modern supermarkets.

### Open Air Markets

Ghana has open air markets in many of its towns, not only in urban areas. Markets in urban areas are larger since they are in the downtown areas. Kejetia Market in downtown Kumasi is known as the largest outdoor market in West Africa, where a large number of vendors visit from the north and the neighbouring countries to trade various products. There are also multiple open air markets in the city of Accra such as Makola and Abgobloshie, the two largest markets in the downtown area, and Madina, Dome, and Kaneshie which mainly sell meat.

While many open air markets sell various food products, there also are markets that sell specific foods only, such as Kaneshie. Other than Kaneshie



Kejetia market. In addition to food products such as fresh tomatoes, chicken, boiled egg and rice, electronic goods and bags are sold. The centre of the market is lively with loud megaphones. A new market is being built on the back side.



Makola market. Tomato is in high demand in Ghana and is imported from Burkina Faso during the off-season. Northern tomatoes are watery and cheap.



A wholesaler's store in Makola market. Imported 25 kg rice bags and cooking oil is piled up. It owns a multiple warehouses inside the market and imports food products from OLAM-trading company. Sugar is imported from Central and South America.

<sup>49</sup> Government of Ghana, "GSGDA II 2014-2017, Dec. 2014

<sup>50</sup> Oltmans, "A case study on the food retail environment of Accra, Ghana", 2013  
<http://lib.dr.iastate.edu/cgi/viewcontent.cgi?article=4641&context=etd>

which sells meat, Haatso Yam market near Accra sells yams wholesale.

Producers usually transport their crops to the market by themselves or jointly through agents. Sometimes, they procure products other than crops on the way to the market to sell at the market. At markets, products are sold to wholesalers in early morning as entire truckloads or in large units by cash. Wholesalers sell the products to the markets or customers in the morning or afternoon. At a large market like Makola, wholesalers and retailers sell products in separate areas and general customers purchase products in smaller quantities. Usually, retailers who sell the same category of products all operate in the same area and wholesalers set up their stores outside the market, since it is more convenient to move their trucks in and out. In some cases, distributors or wholesalers visit farming villages directly to purchase crops for sale at the markets; however, this is not usual<sup>51</sup>.

In addition to foods, commodities and electronic goods are sold, usually around or in the vicinity of the market, so consumers can purchase various non-food products as well as food products.

Trade between the markets is also conducted. Even though Abgobloshie market in the northwest of Makola market is smaller than Makola, it opens at 2am in the morning and the market is famous for direct selling of products by producers from the suburbs and agents. Since bringing products in and out can be done at Abgobloshie more easily than at Makola, food service businesses such as restaurants also visit the shops. Fresh vegetables are particularly cheap and some commented that the prices are around half of the retail prices. Main products that Abgobloshie trades are domestic tomatoes and fresh vegetables but it also sells red onions produced in Burkina Faso and lettuces and cabbages from Togo. Retailers of other markets purchase products at Abgobloshie frequently. Some vendors check the price on the phone before visiting the market since it changes every day.

Power is supplied inside the market and vendors that sell meat are equipped with simple refrigerators. The government visits stores every day to collect rents at Makola market.

Women play major roles at open air markets. Often it is women who bring products into the market and sell them. Many vendor unions have female representatives, who are called *ohemma*, or market queens.

### **Mini Markets**

Mini markets on the streets or in the residential areas play a critical role for consumers who do not go to markets for shopping. Usually, mini markets sell daily foods, small amounts of fresh fruits and vegetables and processed foods with long expiration dates. Those with refrigerators may sell refreshing beverages or meat but such mini markets are rare. This is partly because it is not easy to purchase chilled or frozen food and store them at home in Ghana where electricity supply is instable and also not many households possess refrigerators. Mini markets purchase products from the market wholesalers and sell to consumers by adding transport and other costs to the price.

Product line-ups are a mixture of domestic and imported goods, not only processed foods but also imported fruits and vegetables such as South African apples and grapes. Imported goods are sold due to the increase in direct imports by many wholesalers from whom mini markets purchase products. In particular, the majority of the processed foods sold at mini markets are often imported.

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<sup>51</sup> Same as previous

## Street vendors and peddlers

Street vendors sell various products to pedestrians and vehicles on the streets. While in urban areas peddlers usually sell on the streets, in non-urban areas they go around residential streets to sell products. Therefore, the population in farming villages purchases from peddlers more frequently than that in urban areas<sup>52</sup>. Street vendors purchase products from wholesalers or retailers. Compared to retail or market businesses, the ratio of men in the peddling business is high. A unique feature of street vendors and peddlers is that they sell ready-to-eat products, including cooked products and homemade beverages. Cold water and ice cream products in pouches are stored in small cooler boxes as well as snacks, biscuits and other ready-to-eat foods. In farming villages, peddlers selling popular foods and beverages in pots or buckets on their heads are often seen.



Street vendors sell various products. Banana chips (left), grilled plantain and fish (middle) and maize drink (right).

<sup>52</sup> [http://www.ifama.org/files/IFAMR/Vol%2017/\(7\)%20Meng\\_20130041.pdf](http://www.ifama.org/files/IFAMR/Vol%2017/(7)%20Meng_20130041.pdf)



### 2.2.3 Modern Retail

Modern retail businesses such as supermarkets and shopping malls are recent arrivals and only limited in urban areas. However, due to the increase in the urban population and rate of car ownership, such businesses have expanded rapidly. Major supermarkets manage their businesses vertically which enhances their competitiveness and differentiates them from traditional retail businesses. More shopping malls have been constructed led by foreign-affiliated enterprises. Although the number of such malls is small and still limited to urban areas, popularity is high and the rate of vacancy has continued to be nil.

#### Supermarkets

Modern supermarkets in Ghana have expanded greatly since early the 2000s. In recent years, more foreign brands have launched businesses along with the expansion of the shopping malls. There are mainly 6 modern supermarkets in Ghana: Melcom, Maxmart, Marina Supermarket, Koala, Shoprite and Game. Except Shoprite and Game, the supermarket chains mentioned are run by the local companies; however, these owners are families who have lived in Ghana for many generations, but were originally born in other countries.

While the oldest supermarket Melcom is owned by ethnic Indians, Maxmart is a retail sector of the Lebanese trader Kwatsons, Marina Supermarket is related to French-speaking Burkina Faso which has strong connection to France and Koala is a supermarket run by the Lebanese Wolley family. Both Shoprite and Game are South African brands which entered Ghana after 2003, and tend to be the anchors of within malls that house many other small shops. Many of those 6 supermarkets have stores in Accra and other major cities in Ghana with distribution sites in each city. Overall, 45 supermarket outlets exist in Ghana.

Target customers differ by each modern supermarket. Koala and Marina target high-income groups and foreigners while Shoprite and Melcom target the



The largest supermarket chain, Melcom. In addition to food, electronic products and miscellaneous goods areas, it has an eat-in corner.



Maxmart in Kumasi. Besides Accra, it has one shop in Kumasi and Tema.



South African "Shoprite" in Accra mall. South African "Game" also operates in the mall.



Koala shop. It has an imported wine shop, restaurant and café in the same area.



middle layer. As mentioned, the informal sector composes 96% of the retail businesses in Ghana and therefore modern supermarkets and traditional retailers are not considered to compete against each other but to coexist. Although the number of supermarket outlets is increasing, mini markets are more frequented in the urban areas due to their proximity to work and residential areas, and street vendors are more convenient, with ready-to-eat retail snacks and light meals available and easy to purchase. On the other hand, an increasing number of consumers in Ghana appreciate the one-stop advantage of buying a variety of goods at supermarkets where a broad range of products are sold at competitive prices in one place. If the car ownership rate and the size of supermarket industry continue to expand, the current non-competitive coexistence may no longer be possible.

Modern supermarkets are able to offer a wide variety of products at competitive prices because of the vertical management style. Major supermarkets conduct not only retail businesses but also import and wholesale, equipped with warehouses and distribution functions. As a means to procure consistent quality of products stably for a large number of stores, supermarkets have chosen to import. They conclude exclusive contracts with overseas brands and wholesale to domestic small-sized supermarkets and open air markets. On the other hand, the rate of domestic procurement is low: about 10% in the case of Melcom and only 5% for the foreign-financed Game<sup>53</sup>. Main domestic food products sold at modern supermarkets are limited to fresh vegetables, popular cooking ingredients in Ghanaian cuisine (such as plantain flour, cassava flour and spices) and processed foods manufactured domestically by foreign-affiliated companies (beer, mineral water).

One of the differences between such supermarkets and traditional retailers is that they have freezers. Major supermarkets are equipped with freezers and refrigerators to sell cold water and frozen meat. The most traded meat is poultry and Marina even has a section for fish. They import frozen vegetables and frozen processed food and have installed French equipment. Melcom uses a Chinese freezer and outsources chilled transport instead of doing it by themselves.

Supermarket chains have aggressive plans to keep expanding their stores. Marina plans to open a new store in 2016 and Maxmart runs Maxmart Express, a supermarket similar to a convenience store, on the premises of a petrol station. One of the factors pushing such proactive store strategy is the import conditions of the chains. Each of the supermarket brands usually has an exclusive contract with overseas brands to import products to Ghana. In many cases the contract sets an annual minimum purchase with a higher price discount applied if a buyer purchases a higher quantity. Large chains also own warehouses. Today, more consumers are eager to buy at supermarkets and supermarkets find they can make more money by opening new stores and having a quick turnover of products, which increases the quantity they can import and decreases unit price, enabling them to sell products at even cheaper prices. It is a business model based on high and growing volume. Because supermarkets also wholesale, selling products at reasonable prices to a large distribution base will be a critical component to acquiring market share. One of the challenges that import-dependent supermarkets face is the erosion of the domestic currency. Since the Ghanaian Cedi is becoming weaker against the US dollar or Euro, many chains set the currency rate higher upon concluding contracts to hedge the currency risk.

## Shopping Malls

The expansion of shopping malls has been a recent trend observed in Ghana. Accra Mall, opened in 2008,

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<sup>53</sup> Oxford Business Group, "The Report, Ghana 2011", 2011

is the first large shopping centre in the country. Accra Mall was constructed jointly by the investors in Ghana and South Africa which has 69 tenants with South African Shoprite (3,500 square meters) and Game (5,000 square meters) at both ends as anchoring stores. The mall receives 25,000 weekly shoppers and it is one of the most popular shopping sites. Triggered by the success of Accra Mall, construction of a large number of modern shopping centres has been planned. Many of those plans are funded by South Africa thus tenants include South African retailers such as Woolworths in addition to Shoprite and Game. Not only South African supermarkets but also domestic brands such as Koala also plan to open outlets in shopping malls<sup>54</sup>.

As the number of shopping centers expands, expansion is hampered by infrastructure issues including power supply shortages. Currently, large private electric generators are installed in malls to address instable power supply and the malls have built their own sewage handling infrastructure to address insufficient sewage systems.

**Table 16 Major Supermarket Chains in Ghana**

Company name	Capital	Established (opened)	Number of stores
<b>Melcom</b>	Ghana (Indian)	1991	30
<b>MaxMart</b>	Ghana (Lebanese)	2001	6
<b>Shoprite</b>	South Africa	2003	5
<b>Marina</b>	Ghana (Burkina Faso-based)	2013	1 (1 more store opening planned in 2016)
<b>Koala</b>	Ghana (Lebanese)	1989	2
<b>Masmart/Game</b>	USA/South Africa	2007	1

Source) Promar Consulting

**Table 17 Shopping Malls in Ghana**

Company	City	Established (Planned)	Capital
<b>A&amp;C Mall</b>	Accra	2005	Ghana
<b>Accra Mall</b>	Accra	2008 (Expansion in 2016)	Ghana/South Africa
<b>Marina Mall</b>	Accra	2013	Burkina Faso
<b>West Hills Mall</b>	Accra	2014	Ghana/South Africa
<b>Junction Mall</b>	Accra	2014	South Africa
<b>Achimota Retail Centre</b>	Accra	2015	South Africa
<b>City Garden Mall</b>	Kumasi	2016 (Planned)	Ghana/South Africa
<b>Meridian Mall</b>	Tema	2016 (Planned)	South Africa

Source) Promar Consulting



Various products sold in a Melcom supermarket. Frozen products (left), dairy products (middle) and UHT milk (right).

<sup>54</sup> Oxford Business Group, "The Report, Ghana 2011", 2011

**Table 18 Price Comparisons of Common items at Ghanaian Retailers**

Products	Unit : GHS							
	Shoprite	Game	Maxmart	Koala	Supermarket in Kumasi	Small Retailer	Fruits and vegetable shop	Street vendor
Whole milk (UHT) 1l	8.99	8.49	10.4	9.75		10.5		
Mineral water (Volic) 500ml	0.99	0.6		0.7		1		
100% Fresh juice (Blue Skies)	5.99			7.45	6			6
Vegetable oil 2l	15.99 (Frytol)	14.99 (Frytol)	41.60 (Agrior)	15.52 (Frytol)	13.50 (Frytol) 28.50 (Agrior)	15		
White Sugar Domestic) 2kg	10.99		10.90			14.00		
Brown rice (Domestic) 2kg	19.99			24.44				
Brown rice (S Africa) 2kg	17.99							
Aromatic rice (Thai) 2kg.				20.48				
White Rice (UK) 2kg				28.00				
White Rice (USA) 2.2 kg				42.00				
White Rice (Domestic) 2kg.						20		
Tomato (Import, each) kg	49.99							
Tomato (Domestic, each) kg	18.99							
Pineapple 1	1.59		3	2.47			3	
Egg (Pack)	12.49 (15)	11.59		12.35 (15)				
Boiled mackerel tomato (Geisha) 425g			8.7		6.5	7		
Cheese (Cowbell) 120g	7.99		6.2		6	6.5		

Source) Promar Consulting



Instant noodles (left), processed tomato products (middle) and roasted peanuts (right) are popular products.

## Marina Supermarket

Marina is a company in Burkina Faso which started business in Ghana 40 years ago. In addition to Ghana, Marina has 5 stores in Burkina Faso and one in Niger. It is a retailer as well as an importer and a wholesaler. By importing products directly, Marina increases profit and enhances its ability to offer imported brands not sold by competitors. In fact, 40% of the products Marina sells are exclusive to them. Marina mainly imports from France at reasonable prices due to its historical relationship with the country. It imports both food and non-food products in mixed containers. Goods are often imported under exclusive contracts.

Marina uses French refrigerators and freezers and sells products such as butter, milk and frozen fish. One popular imported product is frozen cut vegetables. The supermarket's main customers are high-income households who have their own car transport, since there is no bus stops near the Marina Mall where the supermarket is situated.

Marina purchases from domestic wholesalers who sell imported goods (such as poultry); therefore, it does not sell a wide variety of domestic products. Domestic products sold by Marina include locally produced goods often consumed in Ghana (nuts and spices) and juice. Instead of purchasing from farmers, Marina hired the company Eden Tree to manage the freshness of products in the store. Marina has documented contracts with all of its suppliers and no major issue in this is reported by Marina.

One of Marina's challenges is the expansion of its competitors. In particular, construction of shopping centres is seen as a threat, as they almost always have supermarkets as anchor stores. Since Carrefour is reported to be expanding into Ghana, increased competition cannot be avoided. Marina also pays attention to other supermarkets which are increasing their number of outlets. Other challenges include higher operational costs due to instable power supply and the recent weak local currency. Since most of the products Marina sells are imported goods, a weak Cedi will impact its procurement costs. One characteristic of Ghanaian consumers is that they prioritise price over anything else. They have little trust in brands and easily switch to other brands if another offers lower prices. They also have less loyalty to countries of origin.



Marina supermarket is located in Marina mall.



There is a large vegetable section with fresh products.



The seafood section sells fresh fish.



## 2.2.4 Distribution and Wholesale Systems

### Distribution for Modern Retail (Supermarkets)

Large modern supermarket chains in Ghana have a top-down management system and their own distribution division. Since they are also importers, integrated product distribution systems bring products from major ports such as Tema to their own warehouses, then on to retail shops or wholesalers. Chains with cold chains are limited to Marina and South African brands and the largest, Melcom, outsources freezing facilities and chilled transport to third-party providers.

Less than 10% of the food in modern supermarkets is reported to be, procured from wholesalers. Usually, supermarkets procure products from wholesalers at markets such as Makola and transport them with their own trucks. Large chains are not engaged in contract farming with producers. However, the quality of fruits and vegetables procured varies and fruit is often imported from South Africa as well as vegetables such as onions.

Marina supermarkets that target high-income customers procure vegetables from Eden Tree, which was established in 1997 and wholesales quality vegetables and fruits grown on its own farms in the Eastern and Volta regions. Today, Eden Tree produces 80 types of fruit and vegetables, selling not only to the high-end retailers such as Marina but also delivering to hotels and premium restaurants. In addition to producing fresh fruits and vegetables, the company cuts and packages products in-house to sell as high value-added products<sup>55</sup>. At the store-level, the freshness of the fruits and vegetables in the supermarket stores is managed by Eden Tree to assure quality.

Modern supermarkets tend to procure fruit and vegetables that are already cut and processed instead of buying raw products and cutting or processing at their own sites. Food products that already exist in Ghana (such as frozen meat) and famous brands (such as Coca Cola) are procured from domestic wholesalers. The 40 domestic suppliers to Marina do not necessarily supply domestic products since some of their product line includes well-known foreign products.

Wholesalers who sell imported goods either import by themselves or procure through international traders and foreign trading companies. Some imported goods are sold with their names attached for domestic distribution. One of the major wholesalers is Forewin. It is the largest wholesaler with 21 warehouses in the country, a site in the Free Zone and offices in Accra, Kumasi and Takoradi. It also owns 48 Cash & Carry stores in the country. Forewin sells brands such as Tiger Brand, Pascual and Friesland Campina but no frozen or chilled food products.

Finatrade is another major wholesaler, which sells frozen meat (Greens, Sandra, Tyson) and delivers products by using refrigerated vehicles. It also sells processed foods and beverages such as Ceres, Carlsberg and Hero brands wholesale.

### Relationship between Modern and Traditional Retail Markets

Even though the modern retail industry is expanding in Ghana, it's still holds only a few percent of the overall retail market. Modern retail does not currently compete against traditional retail businesses; however, competition may begin to be seen if the modern retail market expansion continues. Currently, the majority of the products sold by the modern retailers are imported goods, and domestic fruits and

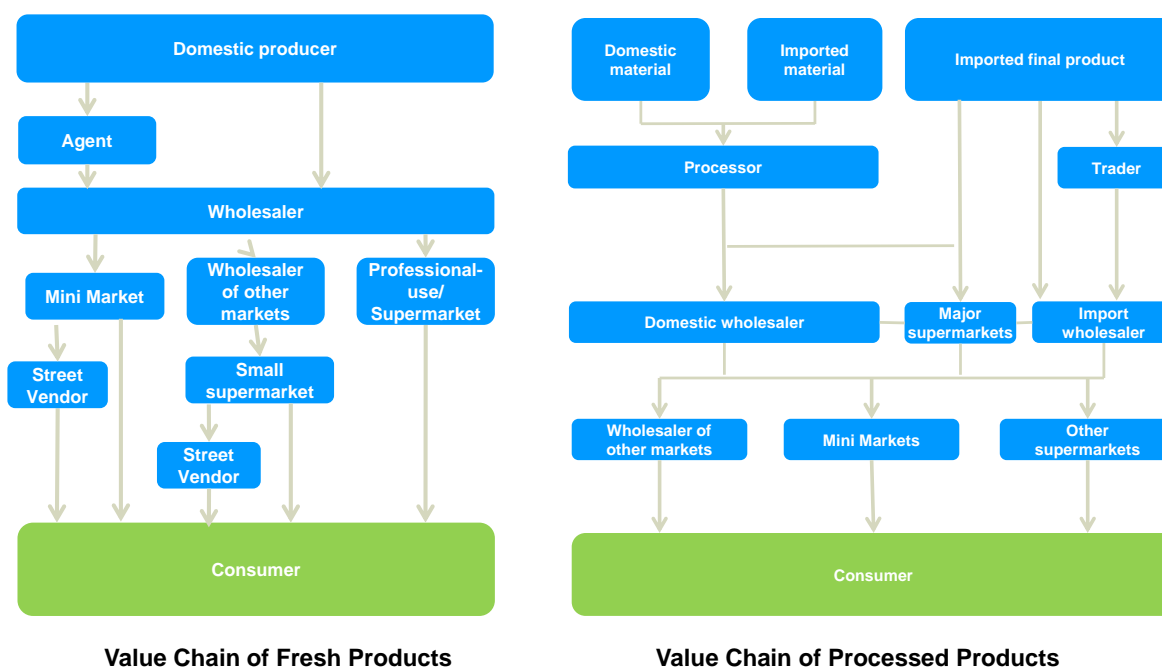
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<sup>55</sup> <http://www.edentreegh.com/>

vegetables are rarely procured. The fruits and vegetables that are supplied tend to come through wholesalers at markets, and thus the relationship between modern retailers and producers is weak.

In the traditional retail industry, open-air markets still play a critical role, where products sold by wholesalers who bring products from the farming areas. Mini markets and street vendors also obtain their products via this traditional supply chain.

**Figure 13 Value Chain of Fresh Products and Processed Products**



Source) Promar Consulting

## Wholesale

In Ghana, wholesalers play a critical role. Wholesalers that trade domestic products and imported goods are separate. While the former procure products mainly at open-air markets and then sell to mini markets and processors at the same markets, the latter procures foreign products by importing on their own or via international traders (such as OLAM) or trading companies and wholesales to large domestic supermarkets or wholesalers in the markets. Modern retailers also, through their own network, import products directly under exclusive contracts and sell to other stores or wholesalers. Trade among those three parties is also seen; however, wholesalers who sell imported goods are considered less likely to also sell domestic products.

## Issues for Modern Retail Businesses related to Product Supply

In interviews during our field research in Ghana, the following points were indicated as supply issues for supermarkets:

- **Price is the top priority.** Many chains procure products based purely on price. Origin or brand is not so critical.
- Many chains are increasing their number of outlets. More stores will open in areas other than Accra, which will require **maintenance and improvement of distribution network** to supply products to

such areas.

- Contracts tend to be for a year, so the **secure and stable supply is important**.
- Some chains do not have a proper cold chain system, suggesting a possibility for growth in the **maintenance and improvement of cold chain distribution infrastructure**.
- Chains rarely process or pack products, thus products **need to be sold as finished goods**.
- **Power shortage and scheduled power outage are a serious concern**. Today, individual stores install their own power generators, which leads to increases in costs and impacts the quality of frozen and chilled products.
- South African supermarkets get most of their imported goods from South Africa and the **procurement rate of domestic products is significantly low**.

### Profile: A Small Wholesaler in Accra

This wholesaler has been in business for 15 years. The wife runs the business while the husband works in the US. It sells mainly in the nearby residential area, to around 12,000 retailers. The owner of the store procures the majority of its goods in large volumes from the 6 major suppliers and sells in bulk to retailers. Retailers then divide the bulk packages into smaller portions and sell to peddlers and street vendors.

The six suppliers all have different strengths. The wholesaler buys alcoholic beverages and juice from Marina, milk, sugar and canned fish from Forewin, and South African products (such as Ceres juices, Parmalat) from T&T Brothers. Since some products are traded by several suppliers, the wholesaler always checks the price and procures from the one that offers the lowest price. Until several years ago, they procured from the wholesale division of Shoprite; however, they terminated the business after Shoprite raised the prices.

Payment to suppliers must be made in cash within two weeks from delivery; thus the wholesaler needs to have cash available at all times. While wholesalers in Makola market are larger in size, import products directly and buy container-loads of goods thanks to access to bank loans, wholesalers in cities cannot afford to trade products on such a large scale.

This wholesaler only accepts cash payments from retailers. After some consideration, it decided not to sell ice cream due to necessity of installing a freezer. Today the store only sells products that can be stored at room temperature.



Outside the shop



Inside the shop



It sells various imported rice products.



## 2.2.5 Fast Food and Restaurant Industry

### Fast food

Foreign fast food chains are increasing as more shopping malls are constructed. However, the total number of fast food chains is still small. Among those chains, restaurants selling chicken are prominent. For example, KFC opened its first store in 2011. In Ghana, Masco Foods, under the Mohinani Group, owns the franchise rights.

In addition to Western brands, African franchises are also seen, such as South Africa's Barcelos (selling grilled chicken) and Nigeria's Chicken Republic (selling fried chicken and chicken burgers). These fast food chains still have only a few outlets, usually found in shopping malls. Currently, they only have shops in Accra.

Shopping malls are very popular among consumers, and as the shopping mall industry develops, fast food businesses are also expected to expand.



Some retail shops are built next to a gas station (left). Foreign fast-food chains are increasing at shopping malls (middle: Marina mall, right: Accra mall)

## 2.3 Business Development and Foreign Investment in the Ghanaian Food Value Chain

Along with the expansion of the modern retail business, more foreign enterprises are entering the Ghanaian market. There are also increasing numbers of companies providing supplies and equipment for processing and trading in inputs, driven by agricultural development initiatives from the government. In particular, inputs traders are using Ghana as a base to sell products to neighboring countries. Some of those companies have their own warehouses near the port of Tema and sales bases in Kumasi where agriculture and distribution systems are well established. As shopping malls expand, the fast food industry targeting Ghana's middle income consumers is also expected to expand, suggesting the possibility of not only Western but also African enterprises entering the market.

There are foreign enterprises that process and export cacao, fruit and oil palm produced in Ghana, many of which use the Free Zones near the port of Tema. The majority of such enterprises are Western multinationals. Major international grain traders also conduct business in the Ghanaian market.

### 2.3.1 Recent Foreign Investment Trends Related to the Ghanaian FVC

#### Major Foreign Enterprises

Since cacao is one of the most important export items and also a critical product from a historical aspect in Ghana, the government corporation COCOBOD exclusively buys and exports cacao beans. Private companies procure cacao beans from COCOBOD, process into cacao powder, cacao mass and cacao butter and then export. Two large multinational cacao bean traders ADM<sup>56</sup> and Cargill run businesses in Ghana, processing cacao mass (cocoa liquor) and cacao butter in the Free Zones. Worldwide chocolate brand Barry Callebaut from Switzerland opened a cacao bean processing factory in Tema in 2001 and added a second line in 2007, increasing the annual processing volume of cacao beans to 60,000 tons. The brand produces cacao mass and cacao nibs. Other foreign corporations such as Cadbury-Kraft from the UK and Triairi from Ecuador also have processing sites in Ghana.

In terms of domestic production, Nestle from Switzerland has its business hub for West Africa in Ghana, producing chocolate beverages, powdered chocolate beverages, milk powder products and instant coffee. Cadbury-Kraft produces a chocolate beverage called Richoco for the domestic market using Ghanaian cacao powder (milk powder and sugar are imported from Europe).

Foreign companies listed on the Ghana Stock Exchange are Unilever and Guinness. Unilever entered Ghana in 1992, selling home care and personal care products other than food. Through its subsidiary Twifo Oil Palm Plantation, Unilever has been involved in the production of oil palms and refinement of palm oil, as well as procuring salt and prawns domestically. The company also conducts milling. Guinness owns two factories and one warehouse in Ghana, producing malt-based beverages in addition to alcoholic beverages. Most of the raw materials such as malt are imported. Guinness launched a beer using domestic cassava in 2012 and SABMiller also produces and distributes beer made from cassava in Ghana.

<sup>56</sup> ADM cocoa business was purchased by a French trading company OLAM in 2015

In the food distribution and logistics industry, as mentioned, while domestic companies play a significant role, South African companies are also prominent in the Ghana market. The South African companies import over 90% of their food products and rarely procure locally. The wholesale industry is less impacted by foreign companies, except for a few Indian and Lebanese companies.

Agricultural inputs (such as fertilisers, agrichemicals and seeds) are sold by large agribusiness companies such as Syngenta, Bayer and Monsanto through sales distributors. Syngenta uses different distributors depending on the product. Yara (Norway), the world's largest agrochemical company has established Yara Ghana to do bulk blending of fertiliser in Tema, and more Indian and Chinese brands have emerged recently. Wynca, owned by the largest agrochemical manufacturer in China, enjoys a high share of the Ghanaian agrochemical market and opened a production plant in Kumasi.

Large agricultural machinery manufacturers also conduct businesses in Ghana through sales distributors. In addition to Massey Fergusson, Case, Farmtrac, Landini and Mahindra, Chinese brands also run businesses through sales distributors. John Deere has entered the Ghana market through South African dealer Afgri, with an intention to differentiate from competitors in the areas of spare parts and customer follow-up services.

### **2.3.2 Major Ghanaian Companies**

More than 70% of the fast moving consumer goods (FMCG) consumed in Ghana are foreign brands<sup>57</sup>. Within the remaining 30%, domestic companies enjoy large share in milling, vegetable oil and beverage markets. Some Ghanaian companies also export to the neighbouring countries.

In the milling business, Irani Brothers & Others Ltd (Lebanese immigrants) is the dominant brand, taking 55% of the domestic four markets<sup>58</sup>. The second largest Takoradi Flour Mills Ltd (Armenian immigrants) has a 40% share of the market and imports its wheat from Canada and the US.

The two palm oil manufacturers (GOPDC and BOPP) were originally founded by the government of Ghana. Both of them are now privatized, by having Unilever as the major buyer. GOPDC was founded by the government of Ghana, then privatized in 1995; it owns a plantation of 14,153 hectares. Today, a Belgian company Siat NV is its largest shareholder. BOPP is a joint venture between the government of Ghana and Unilever and a Singaporean enterprise Wilmar became the largest shareholder in 2011.

Fan Milk is the largest dairy products; however, it depends on imports of raw materials to make up for insufficient domestic milk production.

Cocoa Processing Company is a domestic company listed on the Ghana Stock Exchange that processes cacao beans and manufactures finished goods. While it processes and exports cacao paste and cacao butter, it also produces sweetener products and sells in Ghana.

In the confectionery business, such as biscuits, Parlays Ghana Ltd is one of the largest brands, founded by Indian immigrants. The flour it uses is imported from Turkey.

The largest canned fish company is Pioneer Food Cannery Ltd. Its major products are canned tuna, sold both in Ghana and exported abroad. The company also produces their own private labels.

<sup>57</sup> Oxford Business Report, "The Report, Ghana 2016", 2016

<sup>58</sup> IGC, "An Enterprise Map of Ghana", 2012

In the beverage industry, fruit juice brand Aquafresh is the largest Ghanaian brand (founded by Lebanese immigrants). It used to procure raw materials domestically; however, since securing the volume of supply required for production had been difficult, today it now imports fruit concentrate from China and Asian countries. In alcoholic beverages, Kasapreko, the largest herbal gin producer is a local company. However, it relies on imports for 80% of its raw materials and uses only domestic herbs for production.

### **2.3.3 Contribution of Major Players in Improvement of Local Procurement Rates in the FVC and the Role of NGOs**

The most significant challenges the FVC in Ghana faces are the improvement of the local procurement rate in processing and retail businesses, and the improvement in the agricultural productivity. In processing and retail businesses, some companies have started procuring domestic raw materials and some wholesalers have started using their own distribution networks for domestic fruits and vegetables. In order to encourage these trends, the government offers a preferential tax to processors who have improved their local procurement rate.

In terms of improving agricultural productivity, international NGOs have played a huge role, collaborating with companies from various industries to solve issues that producers face.

#### **Contribution of Major Players in Improvement of Local Procurement Rate**

Many of processing companies rely on imports for procurement of raw materials. One of the main reasons is the instability of the domestic supply volume and the inconsistent quality. In order to improve the local procurement rate, the government introduced preferential taxes for beer and other products in 2012. Depending on the rate of domestic raw materials used (0%, 30%, 50%, 70%), alcohol tax is reduced or exempted (47.5%, 30%, 20%, 10%, respectively), in the hope of increasing the domestic procurement rate of Ghanaian cassava and sorghum<sup>59</sup>. This tax measure will enable beer brands to lower their prices, which will improve their price competitiveness against imported brands. Companies that produce beer in Ghana such as Guinness and SABMiller launched beers using cassava in 2012 and 2013 respectively.

Guinness uses 51% locally produced cassava in its beer, bringing up the overall local procurement rate of the company to 38%<sup>60</sup>. In order to secure domestic raw materials, Guinness has a long-term contract with a local cassava-derived starch manufacturer and Guinness aims to raise its local procurement rate to 70%.

SABMiller procures cassava by partnering with a Dutch company DADTCO. Since the shelf life of cassava is short, due to a higher water content, it needs to be processed in a very short period of time. Therefore, SABMiller uses mobile cassava processing machinery developed by DADTCO. SABMiller uses the machinery to produce cassava paste, which has a longer shelf life and which is then stored at the beer factory.

<sup>59</sup> PWC "On Point Customs and Excise (Duties & Other Taxes) (Amendment) Bill" 2012  
[www.pwc.com/gh/en/assets/pdf/ghana-on-point-customs-and-excise-duties-and-other-taxes-amendment-bill-november-2012.pdf](http://www.pwc.com/gh/en/assets/pdf/ghana-on-point-customs-and-excise-duties-and-other-taxes-amendment-bill-november-2012.pdf)

<sup>60</sup> African Business Review Jul 23, 2014 "Ghana's Leading brewers strive to become country's most vibrant and iconic business"  
<http://www.africanbusinessreview.co.za/Guinness-Ghana-Breweries-Ltd/profiles/39/Ghanas-leading-brewers-strive-to-become-countrys-most-vibrant-and-iconic-business>

## Role of NGOs

Since agriculture is primarily rain-fed in Ghana, crop productivity is low. In addition, producers face a number of challenges such as lack of proper input goods and knowledge. Producers often struggle accessing loans to purchase inputs and have no means to deliver their crops to the markets. In Ghana, a large number of domestic and international NGOs work to address such issues, including offering microfinance services.

The US NGO TechnoServe works closely with various stakeholders to improve productivity of producers. For around 5,000 cacao bean farmers who have limited access to loans, TechnoServe has provided a comprehensive aid program by working with the NGO Opportunity International (OI) which provides microcredit, as well as working with companies that sell inputs such as seeds and companies that purchase cacao from the farmers. Funds from OI enable the purchase of inputs, which are then distributed to farmers. Cacao beans produced through this system are purchased by the designated companies, subtracting the price of the inputs. Through this program, farmers can buy inputs to improve productivity and have secure purchasers of their products, which will reduce their risk. Also, input goods suppliers, OI and cacao bean purchasers can all secure a return on their investment.

Similarly, agricultural machinery manufacturer John Deere has partnered with banking institutions and the World Food Programme to provide agricultural machinery to 10,000 producers for productivity improvement. Farmers use tractors provided by John Deere as collateral for loans from banking institutions. They then sell the maize they produce to the WFP as food aid. WFP purchases the maize through the banking institutions, who deduct the costs of the John Deere agricultural machinery and then pay the remaining maize price to the farmers. This cycle is monitored and run by TechnoServe to reduce the risk to stakeholders.

This type of innovative business by NGOs is achieving success in the agricultural sector and could be applied to seeds, irrigation facilities and other agricultural machinery.

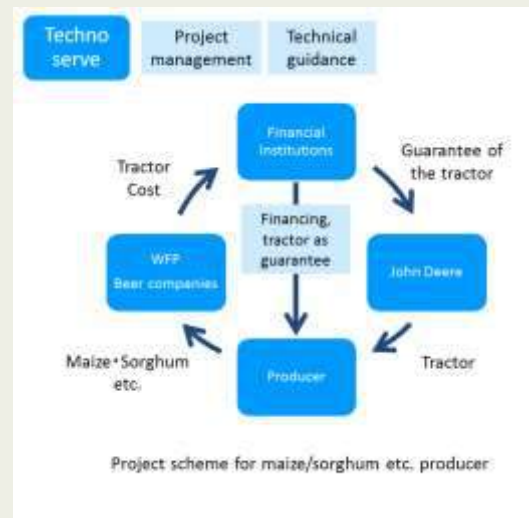
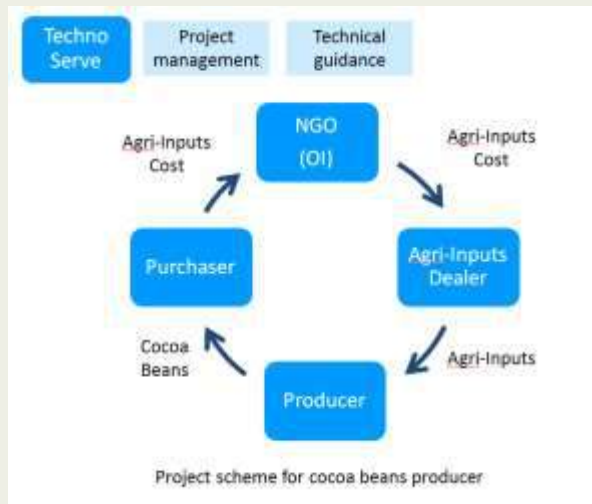
### Profile: TechnoServe, Ghana

The US non-profit organization TechnoServe started its activity in Ghana more than 40 years ago. The organization has conducted activities in various sectors including agriculture, mainly for smallholder farmers in rural areas. Today, TechnoServe has nine portfolios. It works with a wide range of donors to improve value chains from rice, cacao and other crops through design and provision of microcredit for around 30,000 smallholder farmers.

In its project for cacao bean producers, TechnoServe has worked with microfinance institutes such as Opportunity International (OI) and cacao bean purchasers to increase the usage of inputs by producers. OI provides financing services to the farmers and funds the input suppliers, who in return supply inputs to the farmers. When the cacao beans produced by these farmers are purchased by the designated companies, part of the payment goes to OI pay for the inputs they invested in, plus interest, and the remaining amount is paid to the farmers directly. This scheme secures a means of repayment from the farmers and reduces risks.

Similarly, for producers of maize, soy beans and sorghum, TechnoServe has worked with the agricultural machinery manufacturer John Deere to implement an agricultural machinery service. In this program, banking institutions make loans to farmers, using the tractors provided by John Deere as collateral.

TechnoServe provides technical supervision to the farmers and also works with the grain and soybean purchasers such as WFP and the beer brands to improvement the supply chain for these crops. By using a system that includes loans, provision of inputs and support for sales and distribution, both farmers, grain buyers and banks can all make profits with lower risk. TechnoServe is also considering extending its work into cooking oil, domestic poultry, and rice milling machinery.



## 2.4 Ghanaian Policy Related to the FVC

In the Ghana Shared Growth and Development Agenda II 2014-2017, the government of Ghana outlines seven priority items: achieving macroeconomic stability; enhancing competitiveness of the private sector; accelerated agricultural modernisation; oil and gas development; infrastructure and human settlements; human development, productivity and employment; and, transparent governance<sup>61</sup>.

In order to enhance competitiveness of the private sector, the government of Ghana has set up numeric targets such as the number of days required to start a business and achieved significant results in recent years under the Private Sector Development Strategy. According to the business environment ranking by the World Bank, the number of days necessary for starting a business in Ghana decreased from 18 days in 2007 to 14 days in 2016 and Ghana ranked 102<sup>th</sup> in 2016 up from the 145<sup>th</sup> in 2007 in ease of starting a new business, displaying improvement in its business environment. GSGDA states that the government of Ghana will focus on tourism and creative arts industries as well as on development of the legal system to improve loan access for MEMEs and to promote public private partnerships (PPP) for maintenance and improvement of economic and social infrastructure. In the area of agriculture, infrastructure such as irrigation, storage, warehouse and agricultural road are all targeted for PPP.

In the industrial sector, GSGDA announced the establishment of the Industrial Development Fund (IDF) to enhance competitiveness in food processing and light manufacturing industries, through which the government provides funds to support expansion of facilities.

In the agricultural sector, GSGDA I (2010-2013) focused on agriculture mechanisation, improved access to inputs, increased area under irrigation, increased access to credit, and reduction in post-harvest losses. In 2014-2017, it focuses on Agriculture Transformation. With a priority on food security, import substitution, agro-industrial raw materials and exports, the government of Ghana particularly focuses on the following crops and goods:

- Cash crops (cacao, oil palm, cotton)
- Fruits for export (pineapple, mango, papaya, citrus)
- Crops for food security (rice, maize)
- Livestock and poultry
- Fisheries and aquaculture

In terms of agricultural productivity, establishment of a pesticide production plant, machinery purchases and leasing support, and capacity development and research in improved seeds are all mentioned. Within the food value chain, GSGDA outlines forming of clusters that connect the value chain from production to processing and consumption as well as public-private partnerships to drive food processing, warehousing and marketing. Also, to promote investment in agriculture, promotion of private investment for irrigation infrastructure improvement and construction of animal feed production plants for livestock and aquaculture are planned.

Along with the GSGDA II which states the policy of the government, there are the Food and Agriculture

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<sup>61</sup> Government of Ghana, "GSGDA II 2014-2017", Dec, 2014.

Sector Development Policy (FASDEP) and the Medium Term Agriculture Sector Investment Plan (METASIP) developed by the Ministry of Food and Agriculture (MOFA). The latest FASDEP is in Phase II and METASIP is in 2011-2015. Plans for after 2016 are currently under development<sup>62</sup>. FASDEP II aims to provide best practices to improve productivity and income of poor farmers, and modernise the overall area of agriculture. METASIP targets an annual growth rate in the agricultural sector of 6%, 10% of total government budget to be spent on agriculture and annual production volume improvement rate of 50%. These targets match the policies in “Comprehensive Africa Agriculture Development Programme (CAADP)”.

CAADP is the agricultural development framework established by the African Union (AU). The implementation agency is the New Partnership for Africa’s Development (NEPAD) and it aims to improve food security and nutrition in Africa by increasing the agricultural productivity by 6% annually and to increase the agricultural budget of each country to more than 10% of the total.

Among the programmes executed by MOFA, the Fertiliser Subsidy Programme which supports purchasing of fertilisers, Agricultural Mechanization Centers which support purchasing of machinery and the Irrigation Development Programme which promotes irrigation were all well received. Those programmes are explained in Clause 3.3 in detail.

The Ghana Investment Promotion Centre summarises investment opportunities in agriculture and processing of agricultural products as follows:

**Table 19 Investment Opportunities in Agriculture/Agro-processing**

Investment Opportunities	
✓	Agricultural inputs (Improved seeds, Fertiliser • Insecticide • Agricultural chemicals, including herbicide, Vaccine • Chemicals, Animal feed • Feed ingredient)
✓	Processing of agricultural products (Cereals, Potatoes, Vegetables, Fruits, Industrial crops, Livestock, Marine products, Cocoa beans, Silk raw materials others)
✓	Dairy processing, Hatcheries
✓	Floriculture
✓	Irrigation
✓	Cold chain, Packing, Factory construction, Technology related to irrigation and others/Services
✓	Logistics (Transport, Packing, Refrigerator)
✓	Storage

Source) Ghana Investment Authority (<http://www.gipcghana.com/invest-in-ghana/sectors.html>)

<sup>62</sup> From MOFA Interview (November 2015)



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## 3 THE GHANAIAN FVC BY SECTOR AND OPPORTUNITIES FOR JAPAN

In this chapter, based on the interest of Japanese companies in the FVC in Ghana, opportunities for Japanese businesses in the Ghanaian FVC are illustrated from two perspectives: product categories such as crops, livestock and fruits and vegetables; and, cross-sectoral areas such agricultural inputs and machinery.

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### 3.1 Japanese Companies Interest in Ghana

#### 3.1.1 Overview of Relevant Japanese Companies

According to the Ministry of Foreign Affairs, there are 18 Japanese companies operating in Ghana<sup>63</sup>. However, in the areas of agriculture and food, only Ajinomoto has in-country representatives. Ajinomoto launched the Ghana Nutrition Improvement Project in 2009 and locally produces KoKo Plus, a product that adds amino acid to the traditional Ghanaian baby food koko.

Kawasho Foods Corporation also in engaged in business for the Ghana market. The company sells the Chinese-made Geisha brand canned mackerel in tomato sauce through distributors. Geisha is a popular product in Ghana. There are also 4 Japanese companies that procure Ghanaian cacao and shea butter to export overseas and Sakata Seed Corporation operates through its subsidiary in South Africa, supplying seeds. Fuji Oil acquired a 50% of the share of a shea butter processing company in Ghana in 2013 and exports materials for producing chocolate to Europe.

Maruha Nichiro conducted a study to identify the possibility of introducing fish sausage by using the Feasibility Study scheme of the Ministry of Economy, Trade and Industry in 2013.

The reasons that almost no Japanese companies locate their production sites in Ghana are instable power supply, difficulty of the procurement of raw materials required for processing, high cost of importing necessary equipment due to the weakened local currency and the limited domestic market. Lack of availability of local information is also a factor.

Among ECOWAS countries, Ghana has the second largest economy after Nigeria. Its stable public order and political situation as well as legal framework are attractive, showing potential for Ghana to serve as a regional manufacturing site. In fact, multinational companies such as Nestle have made Ghana their hub in West Africa. However, the challenges mentioned above need to be solved in order for more Japanese companies to operate in Ghana.

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<sup>63</sup> As of October 2013

**Table 20 List of main Japanese companies conducting business in Ghana**

	Company name	Description of business	Overview
Sale or trade of finished products (production in Ghana or production in Japan/third countries)	Kawasho Food	Sales of canned mackerel products	Produces canned mackerel products in tomato sauce (GEISHA) in China, exports to Ghana and sells through a Lebanese sales agent.
	Ajinomoto	Sales of baby food supplements	Launched the Ghana Nutrition Improvement Project in 2009 and locally produces KoKo Plus using soybean and amino acids. Started selling from 2014.
	Marubeni	Sales of food products	Imports and sells food products in Ghana.
	Sanyo Foods	Sales of instant noodle	Established a joint venture in Nigeria with Singapore-based trading company Olam International and exports to sub-Saharan African countries from Nigeria.
Purchasing agricultural products/raw material	Fuji Oil	Produces and exports shea butter products	Acquired 50% of the share of a shea butter processing company in Ghana in 2013 and exports materials for producing chocolate to European confectioner manufacturers
	Itochu Corporation	Exports cacao beans	Exports cacao beans
	Tachibana	Exports cacao beans	Exports cacao beans
	VIVIA Japan Corporation	Manufactures and exports skin-care products	Imports shea butter, moringa oil, cacao butter, coconut oil etc. and sells them in Japan.
Sale or trade of agricultural inputs, agricultural/food machinery	Sakata Seeds	Sales of horticultural seeds	Sells horticultural seeds through South African subsidiary.
	Yamaha Motor	Sales of machineries	Deals with irrigation and power generation machines for fishing boats etc. Has a distribution network reaching all of Africa (except Somalia).
	Kubota	Sales of machineries	Deals with tractor, tiller, combine harvester etc. Sells their products through an agency in Ghana.
Participation in service industry (fast food, logistics, IT, etc.)	-	-	-

Source)

"List of Japanese Enterprises Doing Business with African Continent and Countries"

[http://www.afdb-org.jp/file/japan/List\\_ofJapanese\\_Enterprises\\_jpn.pdf](http://www.afdb-org.jp/file/japan/List_ofJapanese_Enterprises_jpn.pdf)

Ajinomoto, 2015, "Ghana Nutrition Improvement Project"

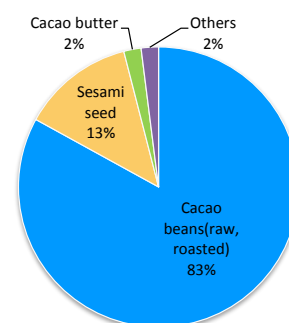
<http://www.ajinomoto.com/jp/activity/csr/ghana/>

### 3.1.2 Overview of Trade in Agricultural and Marine Products between Japan and Ghana

#### Imports to Japan from Ghana

Agricultural and marine products are 98% of the exports from Ghana to Japan, reaching 77 million US dollars in 2013. There have been fluctuations in the import value in the past 5 years. The 2009 import value of 96.83 million US dollars has dropped to around 20% in 2013. However, this is considered to be due to the impact of the currency fluctuation.

Of these Ghanaian imports to Japan, cacao beans are 83%, exceeding 20,000 tons over the past 3 years, which make up 60% of the import volume of cacao to Japan. A remarkable 535 tons of cacao butter, a processed cacao bean product, was exported to Japan in 2013. However, the main suppliers of cacao butter to Japan are Malaysia (12,000 tons) and Indonesia (5,000 tons) and the proportion of Ghana is small. Besides cacao beans and related products, Japan also imports sesame seeds from Ghana.

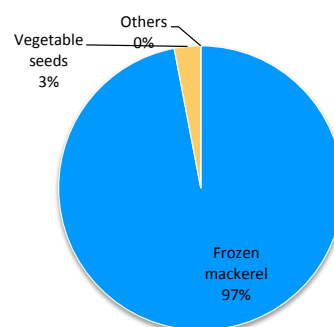


**Figure 14 Japan's Import of Agricultural Products from Ghana**

Source) ITC

#### Exports from Japan to Ghana

Exports from Japan to Ghana reached 180 million US dollars in 2013, mainly automobile, tires and vehicles such as bicycles and buses. In the same year, Japan exported 1.28 million US dollars' worth of agricultural and marine products to Ghana, which is more than 10 times compared to 5 years ago. The main export item is frozen mackerel. In 2013, 1.24 million US dollars (11,000 tons) of frozen mackerel were exported. Frozen mackerel is canned with tomato sauce in Ghana and traded domestically.



**Figure 15 Japan's Exports of Agricultural Products to Ghana**

Source) ITC

In addition to frozen mackerel, Japan exports 2-8 tons of vegetable seeds every year, reaching 340,000 US dollars in export value in 2013.

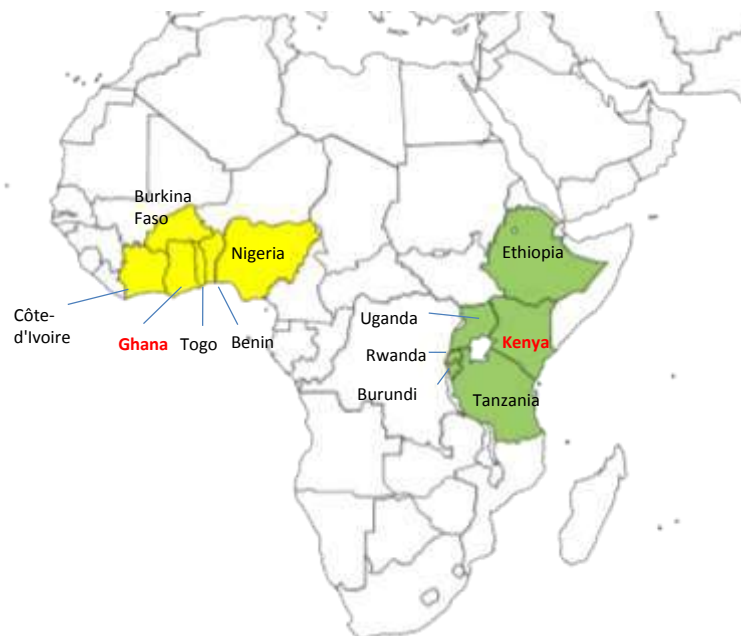
### 3.1.3 Member Companies' Interest in West Africa's FVC

As part of this study, a survey was conducted of the 220 member companies and organisations of Japan's Public-Private Council for Promoting the Global Food Value Chain to understand the interest of Japanese companies in operating businesses in the East African region including Kenya, and the West African region including Ghana. The survey was conducted from 9 to 24 July 2015, with replies from 23 companies. Out of those companies, six were agricultural production and food manufacturing, five were machinery, materials and IT, three were consulting services, one was a trading and finance firm. There were eight other companies of various backgrounds.

**Table 21 Questionnaire Respondents: Number and Type of Companies**

Business type	No.
Agriculture/food processing	6
Machinery/material/IT	5
Consulting/service	3
Trade/finance	1
Other	8
Municipalities	(3)
Logistics	(2)
Packaging	(1)
Construction	(1)
Related organizations	(1)
<b>Total</b>	<b>23</b>

**Figure 16 Countries targeted in the questionnaire**



Source) Promar Consulting

**Table 22 Main economic indicators of the targeted countries**

	Population (10 thousand)	GDP (100 million USD)	GDP growth rate(%)	GDP per capita(USD)
<b>East Africa</b>				
Kenya	4,555	609	5.3	1,338
Ethiopia	9,651	548	9.9	568
Tanzania	5,076	492	7.0	998
Uganda	3,884	263	4.5	677
Rwanda	1,210	79	7.0	652
Burundi	1,048	31	4.7	295
<b>West Africa</b>				
Ghana	2,644	386	4.2	1,462
Nigeria	17,852	5,685	6.3	3,185
Côte-d'Ivoire	2,080	343	9.0	1,646
Burkina Faso	1,742	125	4.0	720
Togo	699	45	5.7	646
Benin	1,060	87	5.4	825

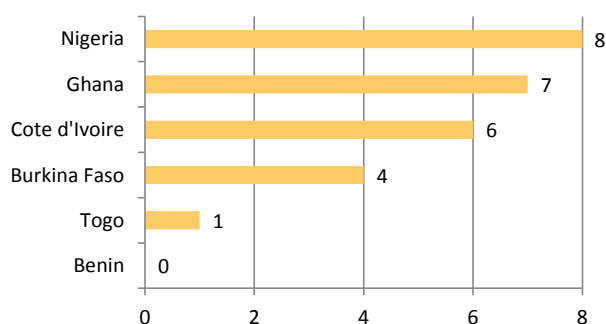
Source) World Bank

Out of the 23 companies replied, eight were interested in both East and West Africa while one was interested only in West Africa. Those who expressed interest were four agricultural production and food manufacturing companies, two machinery, materials and IT, two consulting services and one other agricultural-related organization suggesting strong interest among companies in a wide range of areas

including agricultural production and food manufacturing.

**Table 23 Companies interested in Africa**

Business type	No.
Agriculture/Food Processing	4
Consulting/service	2
Machinery/material/IT	2
Other (related organizations)	1
<b>Total</b>	<b>9</b>

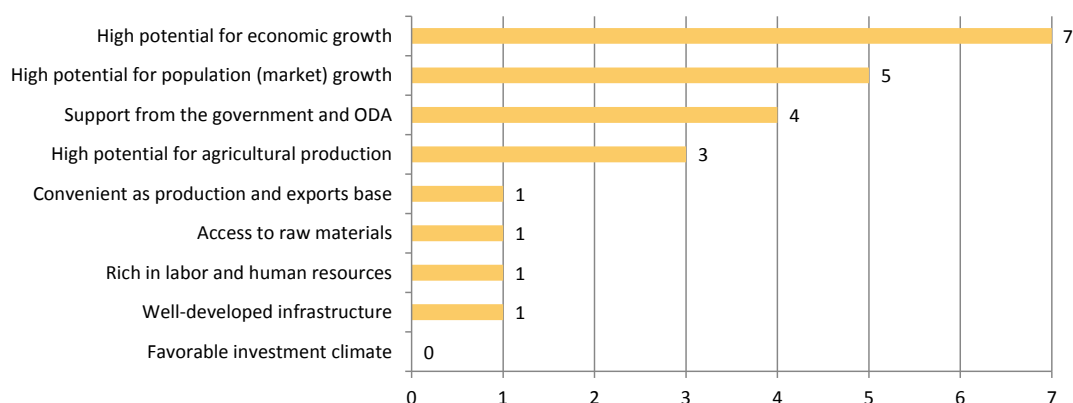


**Figure 17 Countries of interest in West Africa**

In West Africa, Nigeria attracted higher interest than other countries due to its large population and market size; eight companies replied they were interested in Nigeria. The country that attracted the second highest interest was Ghana due to its stable political environment and recent high economic growth rate (seven companies), followed by Cote d'Ivoire (six), Burkina Faso (four) and Togo (one). No company showed interest in Benin.

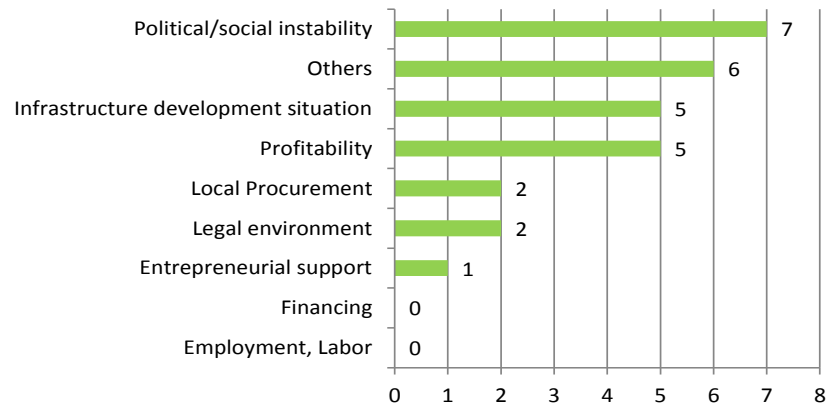
Out of the reasons for interest in West Africa, "high potential for economic growth" was the highest (seven companies), followed by "high potential for population (market) growth" (five). This suggests that the attractiveness of West Africa as a market is the largest factor motivating interest. Other reasons included "collaboration with ODA and entrepreneurial support by the government can be expected", "potential for agricultural production is high", "convenience as a production and export hub", "abundant labour force and talent".

**Figure 18 Reasons for being interested in West Africa**



On the other hand, there were 14 companies that replied they had no interest in West Africa. The main reason was "political and social stability (instable political environment, public security, corruption and bribery)" (eight companies), followed by "other" (five) and "infrastructure preparation (transport, cold chain, telecommunication, electricity, water, etc.)" (five), and "profitability (high cost, small market size, etc.)" (four). In "other", three companies mentioned Africa was out of their strategic area.

**Figure 19 Reasons for not being interested in East Africa**



## 3.2 FVC Business Opportunities by Product

In this chapter, based on the interest of Japanese companies and the potential of business opportunities captured through the local survey, the following five product categories were selected for development of a food map summarising the distribution channels and the current production/ trade situation.

- Cassava
- Rice
- Cacao, shea butter
- Vegetables and fruit
- Meat

### 3.2.1 Cassava

#### Overview

Ghana is the seventh-largest cassava producer in the world and the fourth-largest in Africa. Along with maize and rice, cassava is a critical crop in Ghana and the largest calorie source for Ghanaian citizens. Its tuberous root is the major edible part and leaves are not consumed. The usual size of cassava produced in Ghana is about 15-100cm with a weight of 0.5-2.0kg. Cassava is resistant to diseases, pests and drought and that is why it is grown in many areas in Ghana. Smallholders are the main cassava farmers, where 90% of farms are about 2 hectares. Cassava is often planted in underproductive soil and sold for domestic consumption. Cassava contains a high moisture content and it needs to be processed within 48 hours after collection or it will rot. For this reason, it is rarely used for processing. Today, only 66,000 tons of cassava are used for commercial processing, which is around 1% of the consumption volume. Also, since no proper post-harvest handling (such as waxing, cleaning and plastic wrapping) is conducted, post-collection losses are huge in Ghana, almost reaching 34%<sup>64</sup>.

The main production areas for cassava include the Eastern Region, Brong-Ahafo Region, Ashanti Region and Volta Region, which produce 75% of total production. Usually, farmers rotate cassava with yam, or with maize or beans. According to FAO, annual per-capita consumption was 246kg in 2011. Cassava is consumed in the form of gari, a

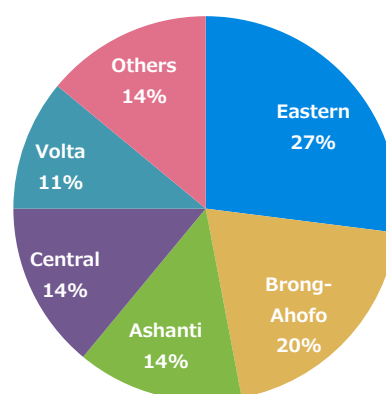


Figure 20 Cassava production by area

Source) FAO



Figure 21 Gari products sold at a supermarket

<sup>64</sup> FAO, "MAFAP SPAAA, Analysis of incentives and disincentives for cassava in Ghana", Jan. 2013

fermented and roasted flour, and cassava flour. It is sometimes used as animal feed. Gari is the main product and production has increased due to the introduction of industrial graters.

Ghana is fully self-sufficient in cassava and around 30-40% of the production volume is kept in the ground until consumption<sup>65</sup>. Priorities for the government are the reduction of post-harvest losses, value-added products and exports. Therefore, under the President's Special Initiative (PSI), construction of a starch processing plant using cassava is being planned; however, no other support measures other than the PSI exist today.

### **Cassava Value Chain**

Cassava is mainly produced by smallholder farmers as subsistence crop, particularly important for family food security, as it grows in poor soil and can be stay in the ground for a long time, until the family needs it. These smallholders usually sell about half of their production to nearby processing plants or markets. Usually, the farmers transport the crops themselves and the role of cooperatives is not strong. Cassava processing facilities are usually small-scale; it is often processed in the home or at communal facilities. Cassava flour is also produced by small and mid-sized companies. In some cases, they package for sale at retail markets. There are also a few large-scale cassava producers who produce starch or dried chips for export.

Processed cassava products are currently: a) Gari and cassava flour; b) starch; c) dried chips; and, d) ethanol. As of now, size of the cassava processing industry is small; however due to increasing domestic consumption volume and demand from ECOWAS, 1.6 million tons of cassava is forecasted to be used for processing by 2020<sup>66</sup>. Cassava is exported to the neighbouring countries either in the form of flour or Gari often through informal channels.

Industrial graters for gari production were first introduced in the 1990s and selling cassava to companies who are using these industrial graters is an important source of revenue for cassava producers. Gari is not only sold domestically but also exported. As demand is high and prices is also rising, many cassava producers who used to supply cassava for chips are actually now selling their products to gari producers who purchase at a higher price, causing a decline in the raw material for chips<sup>67</sup>.

To add value to cassava, the government has built a starch production plant, Aynesu Starch Company (ASCO) which started operations in 2004. Although the plant initiated contract farming with nearby producers, cassava prices were higher on the open market, and many producers ended up selling their cassava directly into the market. ASCO in turn had to procure cassava from these markets. Also, the low quality of starch produced at the plant has led to a decrease in the price, which has damaged ASCO's business. In fact, the utilisation of the plant was only 20%. When Guinness started manufacturing a beer using cassava, the brand concluded an agreement with ASCO to procure cassava starch. This has reinvigorated production at ASCO and it was reported in 2015 that ASCO will be divested to Guinness<sup>68</sup>.

Cassava dried chips are exported to Europe as animal feed. However, since the there is limited supply that meets the various quality standards of European purchasers (moisture content of 12-14%, starch content of 70% or higher, 0% impurity content such as aflatoxin), cassava export volumes to the EU have not

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<sup>65</sup> Cassava can be stored in the ground for up to 18 months without quality deterioration

<sup>66</sup> IDH, "Market Opportunities for Commercial Cassava in Ghana, Mozambique, and Nigeria", June, 2015.

<sup>67</sup> FAO, "MAFAP SPAAA, Analysis of incentives and disincentives for cassava in Ghana", Jan. 2013

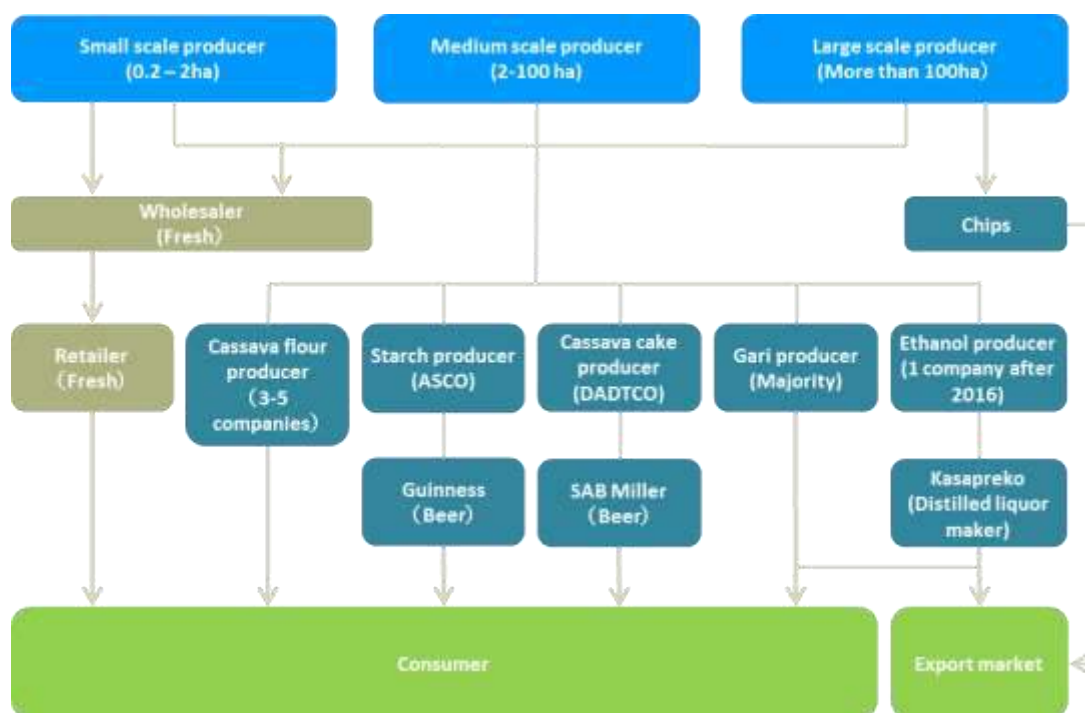
<sup>68</sup> <http://venturesafrica.com/ghana-guinness-to-enter-partnership-over-ayensu-starch-factory/>



increased.

At present, there is no commercial cassava ethanol production, but it has been reported that an ethanol production and distribution plant will soon start its operation to supply largest alcohol brand Kasapreko<sup>69</sup>.

**Figure 22 Cassava Supply Chain**



Source) Promar Consulting

### Challenges in the Cassava Value Chain

Since cassava deteriorates quickly soon after harvesting, it needs to be dried or processed immediately after harvest. As mentioned above, most cassava processing is small-scale and, due to quality issues in starch processing, developed of the industry is lagging. Dry chips processing for Europe is also struggling, due to difficulty meeting the quality standards of the export destinations.

Challenges in the value chain can be identified at the three main stages; production, post-harvest management and processing. Production of cassava heavily relies on rain-fed agriculture and often uses underproductive soil thus the productivity is generally low (about one-third of reachable amount estimated by the Ministry of Food and Agriculture).

There is also significant room for improvement in post-harvest management. Today, the post-harvest loss rate for cassava is over 30% due cassava's quick deterioration and the lack of proper storage and processing plants nearby.

Furthermore, many challenges exist in the processing phase. Even though there are plants in Ghana that process cassava into ethanol, the plants are small and rarely used for large-scale commercial purposes. In Ghana, consumption of gin (distilled liquor blended with traditional herbs) is higher than beer. However,

<sup>69</sup> <http://www.ghananewsagency.org/economics/ghana-s-first-ethanol-plant-to-begin-production-99964>

since the raw alcohol supply is unstable, Ghana imports around 30,000 tons a year of alcohol for distilled liquor of from India and other markets.

Beer companies that use domestic raw materials, encouraged by the government, are promising purchasers of cassava. However, instable production of starch due to insufficient supply of raw cassava has been a bottleneck for beer companies.

### **Opportunities in the Cassava Supply Chain**

The challenges identified in the cassava market above also present opportunities. As cassava self-sufficiency has already been achieved, proper post-harvest technology and value addition are considered to be business opportunities.

#### **❑ Technology transfer for improvement in productivity, including improved inputs; provision of infrastructure and know-how to reduce post-harvest loss**

With appropriate use of inputs and additional technology transfer to improve productivity, the production volume is highly likely to rise. In the post-harvest stage, if cassava is promptly processed, loss can be reduced significantly. In particular, the use of mobile processing equipment that can process cassava directly in the field rather than transporting cassava to the markets or processing centres is worth attention. A project between Dutch DADTCO and SABMiller is a good example (see 2.3.3).

#### **❑ Diversification into processed products such as ethanol for the distilled spirits industry**

Today, Ghana imports ethanol from India and other countries. However, according to the distilled spirits producers, import conditions are strict and ethanol needs to be imported in large quantities which causes a cash flow problem for spirits producers. Thus, a number of distilled spirits companies are interested in procuring ethanol domestically in Ghana if possible. In addition to domestic demand, there are opportunities for export to neighbouring states. In the ECOWAS region, Cote d'Ivoire is the largest importer of ethanol, importing 9 million litres in 2013, making it a potential export partner for Ghana.

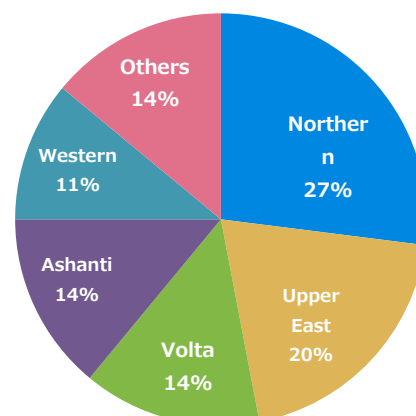
Since Ghana already is self-sufficient in cassava, ethanol can be produced without negatively impacting food security. If ethanol can be produced and supplied at the same quality and conditions as imported ethanol, domestic commercial ethanol production is considered to be possible.

### 3.2.2 Rice

#### Overview

Along with maize and cassava, rice is an important staple crop in Ghana. Consumption of rice has significantly grown over the recent years, but more than 70% is imported. Ghana imports rice mainly from Thailand and Vietnam. In urban areas, the price of imported rice is around the same or even cheaper than the domestic rice and due to the flavour and image, Ghanaian citizens generally prefer imported rice (Jasmine rice).

Major production areas for rice are Northern Region, Upper East Region, Volta Region and Ashanti Region which in total provide 75% of overall production<sup>70</sup>. More than 300,000 farmers are said to be engaged in rice production and smallholder farmers with 2.5 hectares or less consist 80% of the total production volume.



**Figure 23 Rice production by area**

Source; FAO

The irrigation rate is as low as 8% and the usage inputs such as fertilisers or agrichemicals are low. In addition, seeds are also reused which also contributes to the low yield. National average rice yield is 2.5 tons/ha while the government of Ghana estimates 6.5 tons /ha as an attainable yield. Fertilisers from Yara, Wienco, Chemico, Golden Stork and Dizengoff compose 95% of the overall share.

Due to urbanisation, improved incomes and changes in preferences, more rice is being consumed. Ease of preparation and increased use of rice in the food service industry also contribute to the increased consumption. Today, 76% of the rice is consumed in urban areas; however, it is mostly imported rice and only 20% of the rice consumed in urban areas is domestically produced. The remaining 80% of the domestic rice is consumed in rural areas. Annual consumption per capita is expected to increase from 32kg in 2012 to 63kg in 2018<sup>71</sup>. Consumption of aromatic jasmine rice, which is particularly preferred in the urban areas, is expected to grow 40%.

Ghana imposes a 20% customs duty, 12.5% VAT, National Health Insurance levy and ECOWAS levy, which comes to a 37% total levy on rice imports.

The government of Ghana is positioning rice as a priority crop and developed the National Rice Development Strategy in 2009. In this strategy, the government aspires to increase the production 4.3 times by 2018. The strategy also states the importance of encouraging consumption of domestic rice and production of rice by-products. The concrete policies stated by the government include a 10% subsidy for seed purchases, provision of machinery and inputs to certain areas and foundation of the National Food Buffer Stock Company to purchase rice from smallholder farmers at a designated price. However, the fact that major producers (not just smallholders) benefited from the seed subsidy was criticized. In addition, because the NAFCO programme required an enormous budget, these programmes have been downsized.

<sup>70</sup> USAID, "Rice Price Trends in Ghana (2006-2011)", June, 2012.

<sup>71</sup> Department for International Development of Ghana, "DFID Market Development (MADE) in Northern Ghana Programme", Aug. 2015.

## The Rice Value Chain

70% of the rice produced in Ghana is distributed and consumed in the domestic market. However, in the case of major production areas such as Northern Region and Upper East Region, 60% is for self-consumption<sup>72</sup>.

Though domestic rice is usually consumed within the production areas, 20% is distributed in the urban areas. Generally, brokers called aggregators visit production areas in the north to purchase rice and sell to the wholesalers in urban areas. However, the main consumer is Kumasi and not much domestic rice is distributed in Accra. The previously mentioned NAFCO purchases around 5% of the rice produced in the northern area, outsources parboiled rice production to the local producers and supplies rice to the local school feeding programme and the prison meal programme.

Finatrade is the largest rice importer, with a 35% share of the total amount, followed by OLAM at 25% and Stallion at 10%. The remaining 30% is shared by Imexco, City Investment Group, Royal Bow, CCTC, Cereal Investment Co and Ezal Trading. These importers partner with large wholesalers to develop domestic distribution networks. Finatrade also trades a small volume of domestic rice. The majority of the imported rice is imported in bulk; few companies are capable of storing and repacking bulk products; thus the above-mentioned eight brands dominate the imported rice market in Ghana. Together with the wholesalers, these dominant importers are able to set the market prices and the position of domestic rice suppliers and producers is weak in price negotiation. According to a study by the government of Ghana, there is a huge gap between the farmgate price and domestic rice wholesale price at the market. This is due to the pricing decisions by wholesalers who have significant influence at the markets in urban areas, rather than factor such as weak road infrastructure pushing up wholesale prices<sup>73</sup>.

The reasons imported rice is preferred are: a) it is not parboiled rice; b) the aroma (Jasmine rice); and, c) quality of milling is high, the colour is white and has fewer impurities. Recently, Jasmine rice (Jasmine 85) producers using F1 seeds have been seen in Ghana. However, the cost of these seeds is high and many small-scale farmers are still reluctant to purchase them.

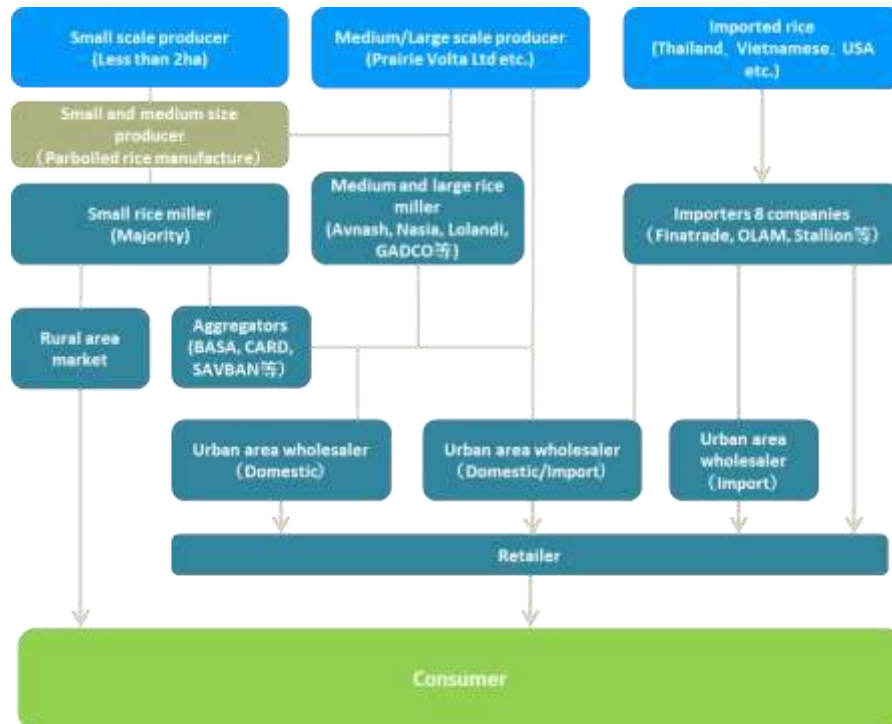
While most rice millers are small to medium-sized, a few larger millers have emerged recently. These millers offer quality close to that of imported rice, in response to consumer preferences, instead of selling parboiled rice. However, their production is still not sufficient to serve the rapidly growing domestic demand and an increase in imported rice is expected.

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<sup>72</sup> Department for International Development of Ghana, "DFID Market Development (MADE) in Northern Ghana Programme", Aug. 2015.

<sup>73</sup> 同上

**Figure 24 Rice Supply Chain**



Source) Promar Consulting

### Challenges in the Value Chain

Rice consumption patterns are different in urban and rural areas. While imported rice is more common in the urban areas, homegrown rice consumption is higher in rural areas. Domestic rice is considered to be facing significant challenges, particularly in the phases of production and milling.

Rice production in Ghana is often small-scale and has low productivity due to low irrigation rates and low usage of inputs and improved seeds. These issues in the production process then also affect the quality of the harvested rice.

Also, the northern part of Ghana is dry and threshing and drying methods are still conducted using older methods which results in broken rice during milling. To avoid rice breakage, rice is parboiled (soaking and steaming the hulls) which is one factor that pushes up the production cost<sup>74</sup>. Furthermore, the quality of rice milling and de-stoning machinery is low, which often causes impurities in the rice.

<sup>74</sup> Same as above.



**Packages of domestic rice (left) and imported rice (right) and their contents**

Issues facing the rice value chain include insufficient inputs, lack of appropriate post-harvest management and quality machinery. Particularly important is whether the rice varieties, quality and supply volume can be provided that would satisfy the demands of consumers in the urban areas. Long-term issues being discussed in Ghana include increasing productivity through land management such as aggregating farmland.

### **Opportunities in the Rice Value Chain**

Opportunities in the value chain of rice exist particularly the production and processing stages.

#### **□ Production and post-harvest management know-how**

In terms of inputs, introduction of F1 seeds in the lowlands where yield is low will greatly impact yield. Although the production of Jasmine 85, a variety particularly preferred by Ghanaian consumers has increased, it has not become popular among small and medium sized producers due to the high seed cost. One project initiated by JICA in Ashanti and Northern Regions has successfully increased the rice yield to 4.1 tons/ha, higher than the national average of 3.3 tons/ha. Initiatives to continue this knowledge transfer will be important.

#### **□ Quality processing equipment such as milling equipment and de-stoners**

As previously described, one of the reasons Ghanaian consumers prefer imported rice to domestic rice is the quality. The quality of domestic rice is low, with unevenly shaped rice and high in high impurities. Japanese milling machinery provided through Japan's 2KR programme are high quality and have been well-received<sup>75</sup>. There is a high demand for introducing this type of milling machinery for commercial use.

#### **□ Increased accessibility of inputs through partnerships with NGO**

For small-sale producers with limited access to loans, milling machinery and trucks is expensive. There are a number of domestic and international NGOs active in Ghana, connecting producers, input distributors, financial companies and crop purchasers to develop a business model that can benefit all stakeholders.

<sup>75</sup> PROMAR CONSULTING, interviews with the persons concerned

Japanese companies with quality inputs have an opportunity to conduct businesses with lower risk by working with such NGOs. In particular, Japanese milling machinery and de-stoners have been well received and there is a high demand for those machines.



### 3.2.3 Cacao and Shea Butter

#### Overview

Cacao is a major cash crop and the largest agricultural export from Ghana. Globally, Ghana is the second largest producer of cacao after Cote d'Ivoire. Around 800,000 producers exist in the country, out of which 90% are small-scale producers (2-3ha). Cacao is produced in Brong-Ahafo and the six regions south of it. Western Region and Ashanti Region are the largest producers. In particular, Western Region has increased its production since the late 1980s and today it has 55% of the total production volume. Production is increasing, reaching 896,000 tons in 2013-2014. Since introduction of a hybrid variety, which has replaced the conventional variety with low yield, the total yield has increased 26% compared to five years

ago. In addition, since the political unrest in Cote d'Ivoire in 2011, more cacao beans have been smuggled into Ghana, which has increased the production and export of 'Ghanaian cacao beans'.

As the international price of cacao beans rises, many small-scale producers have escaped from poverty, which has led to economic development of regional farm villages<sup>76</sup>.

On the other hand, the current yield is 1 ton/ha which is only 40% of the attainable yield estimated by the government of Ghana. Some of the reasons behind this are cacao production methods which rely on the rain-fed agriculture and the low mechanisation rate, with farmers still using traditional hoes and axes. Other factors include aging trees, increasingly aging producers and small scale production.

Today, 80% of Ghana's cacao beans are exported as raw beans while 20% are processed domestically before being exported. Although the government of Ghana had aimed to bring processed beans up to 50% by 2015, it seems that this goal is difficult to achieve<sup>77</sup>. Since domestic cacao processors are only operating at 60% of their capacity, there still is room for growth in domestic processing. However, the processed cacao Ghana produces is only 5% of the value of a final retail chocolate product; in order to domestically produce retail chocolate products, Ghana needs raw materials including milk and sugar, which accounts for 74% of the retail price. (The remaining value is margin for distribution, marketing, retailing etc.) Since Ghana is a net importer of these raw materials, there are still

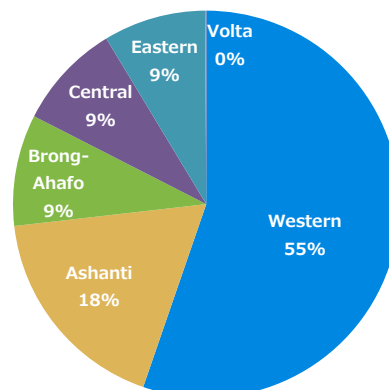


Figure 25 Cacao production by area

Source) FAO



Cacao products for the domestic market

<sup>76</sup> FAO, "MAFAP SPAAA Analysis of Incentives and Disincentives for Cocoa in Ghana", Apr. 2013

<sup>77</sup> Oxford Business Report, "The Report, Ghana 2016", 2016

many challenges to producing cacao-based end products.

Shea butter is produced in the north area of Ghana and is mainly used for vegetable oil, soap and cosmetics. The main products are shea nuts and shea butter, which is produced from shea nuts. Shea nut collection and processing into shea butter has traditionally done by women. Many shea trees are wild and self-seeded, and production can be unstable due to natural fire or deliberate fire set by charcoal collectors.

### **Cacao and Shea Butter Value Chains**

Cacao beans for seeding are produced and distributed to farmers by the public sector organization COCOBOD. Fertilisers are procured from private companies through a bidding process. These fertilisers are collected at the COCOBOD warehouse before distribution to farmers. It is a good opportunity for fertiliser manufacturers to directly market their brands to farmers and many companies participate in the bidding organised by COCOBOD. To participate in the bidding, companies need to be approved and registered by the COCOBOD-owned Cocoa Research Institute of Ghana. Approval period is around two years (generic fertiliser only needs to undergo document screening only, which takes about 30 days).

Harvested cacao beans are purchased by COCOBOD (also known as GCB). Transport from the production area to the COCOBOD warehouses is outsourced to private purchasers (LBC). As of 2014, 41 purchasers have been registered, out of which 32 actually purchased cacao beans from the producers in 2013-2014. COCOBOD sets the floor price upon which each LBC negotiates with the producers and decides the purchase price. Producers choose companies who purchase at a higher price or those who pay by cash or provide good credit or loan conditions when they sell cacao beans.

Major LBCs are PBC, Aguayo Adamou, Aramark, Kuala Kokopo and OLAM. These top five companies purchase around 70% of the total cacao beans. Quality of the cacao beans transported to the warehouses is managed by the COCOBOD-owned Quality Control Company (QCC). All cacao beans are collected under COCOBOD and go through quality management by QCC to secure the traceability of Ghanaian cacao beans<sup>78</sup>.

According to the size, cacao beans are divided into five categories, from Main Crop to Remnant. The larger the size of cacao beans, the higher the price. Smaller beans are processed into cacao butter or cacao powder. Cacao beans in the category of Main Crop are exported as beans, which consist 70% of the total production and those in the category of Light Crop for domestic processing are around 20%. There is no quality difference between the two categories other than the size, which is due to the difference in the climate conditions when the crops were produced (either in the Main Season between October and May, or in the Mid-Crop Season between June and September). In order to encourage domestic processing, COCOBOD sells Light Crops produced during the Mid-Crop Season to vendors at a 15% discount.

Export of cacao beans is exclusively conducted by the COCOBOD-owned Cocoa Marketing Company (CMC). Domestic processors purchase beans from CMC, produce semi-final goods and export. CMC also has an office in London to take orders from the buyers. There are eight processors for export: Barry, Cargill, Niche, OLAM (former ADM), BD Associates, Plot, Real Products and CPC. Barry and Cargill have shares of 26.2% and 25.4% respectively. The top two companies handle 52% of the domestic cacao beans processed<sup>79</sup>. These eight companies produce cocoa liquor, cacao butter, cacao cake and cacao powder to export mainly to Europe. Around 10 companies produce chocolate products for the domestic market and

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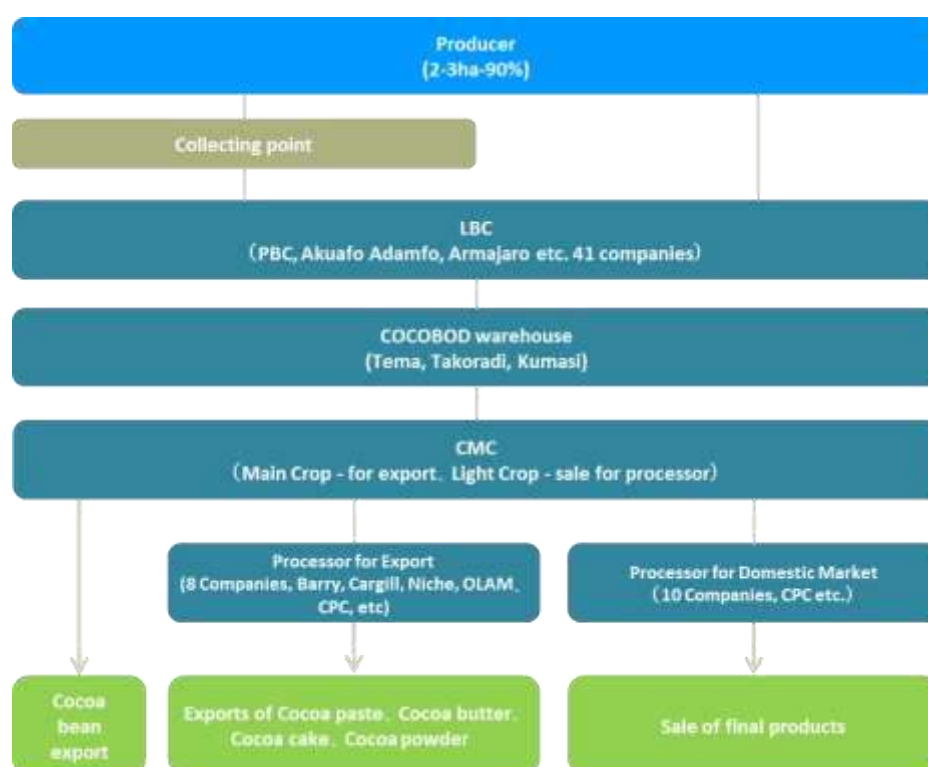
<sup>78</sup> FAO, "MAFAP SPAAA Analysis of Incentives and Disincentives for Cocoa in Ghana", Apr. 2013

<sup>79</sup> COCOBOD, "45<sup>th</sup> Annual Report" Sept. 2014

the annual consumption of cacao beans in Ghana is approximately 13,000 tons<sup>80</sup>.

Similarly, COCOBOD outsources nine LBDs to purchase and transport shea butter to the COCOBOD warehouses. 48,927 tons of shea nuts was exported in 2013-2014 and 711 tons of shea butter were exported. The major players in the shea industry are PBC Shea, 3F Ghana, Ghana Nuts, AAK, Wilmardel, Loders Crockhaan, Shebu Company, Pure Ltd and Savannah Fruits Company.

**Figure 26 Cacao Supply Chain**



Source) Promar Consulting

## Challenges in the Value Chain

One of the factors pushing up the cacao bean price is the high cost of domestic transport. Poor road infrastructure from the farm to the collection site increases transport time and cost. According to an FAO study, transport cost from the production site to the collection site/ warehouse accounts for 25% of the total transport cost needed within the value chain (production to final consumption)<sup>81</sup>.

Low mechanisation in the production area is another challenge. Today, the mechanisation rate is low and conventional farming method is the norm. The low mechanisation rate is related to the low accessibility by producers to loans.

Another challenge is that even though domestically processed cacao beans are exported, sometimes the beans fail to satisfy the quality required at the export destination. Also, packaging and transport materials (such as pallets) need to be procured domestically, but not only are domestic suppliers limited but also the quality is low. Furthermore, many machines used for processing are imported; thus if they need repairs,

<sup>80</sup> PROMAR CONSULTING, interviews with the persons concerned

<sup>81</sup> FAO, "MAFAP SPAAA Analysis of Incentives and Disincentives for Cocoa in Ghana", Apr. 2013

spare parts need to be imported and maintenance services are required. Difficulty with maintenance and repairs leads to lower operation rates.

### **Opportunities in the Cacao and Shea Value Chains**

There are opportunities for Japanese companies in the production and processing phases of these value chains, particularly in inputs and processing equipment.

#### **□ Increased accessibility of inputs through partnerships with NGO**

Most cacao beans and shea nuts producers are small-scale and follow traditional agricultural method. This results in low productivity. Easier access to seeds and fertiliser will greatly improve productivity. Working with NGOs who have close networks among farmers to introduce affordable inputs is possibility for Japanese suppliers.

#### **□ Equipment for export processing**

The main markets for cacao and shea nuts are overseas. Thus domestic processors need to satisfy high quality standards in the Western markets which requires high quality materials and equipment. Unlike domestic cacao businesses, the cacao export industry has higher demand for quality materials and equipment and for suppliers who can provide follow-up services in Ghana. In addition, other materials such as wooden pallets needed for export packaging are difficult to obtain domestically and some traders must even import these.

#### **□ Machinery adapted to unstable power supply**

Ghana's unstable electrical power supply is a particular challenge in processing because instable electricity or voltage supply can lead to machinery breaking down and increases production costs. According to one cacao bean processor, due to power shortages, around 30% of the total processing is using an external generator which further pushes up the production costs. There is high demand for power-efficient machinery and other technology to address the power supply issue.

### 3.2.4 Fruit and Vegetables (Pineapple)

#### Overview<sup>82</sup>

The export of Ghanaian fruits to Europe is mainly pineapples and export have increased significantly since the 1980s. When air transport for machinery for the oil industry increased from Europe to Nigeria, exporters realized that the flights back from Nigeria to Europe were empty, and started successfully exporting pineapples from Ghana using these routes. The major means of transport shifted from air to sea after 1999, which allowed export volumes to increase even more. In order to satisfy export demand, many exporters have started purchasing pineapples from small-sized producers who used to produce pineapples for the domestic market and have also started production on their own. However, export volumes have dropped since 2004 as the consumption trend in Europe has moved from Ghanaian SC variety pineapples to Central American MD2 varieties (Costa Rica).

Small-scale producers, who contributed to more than half of the export volume, could not adapt to the shift to MD2 pineapples and production volume dropped. Although several companies started to process pineapples domestically after the decline in exports to Europe, they could not procure enough raw materials due to the decrease in production and processing industry been on the decline. Only the British Blue Skies brand has been successful in cut fruit and juice processing, which has increased its production and exports. However, the brand imports pineapples from neighbouring countries in some years, due to the shortage of domestic supply in Ghana.

The government of Ghana is funding transplants of MD2 pineapples; however, since there is no know-how on farming MD2 among small-scale producers, the progress of transplanting has been slow. On the other hand, the majority of the large producers have already transitioned to MD2. Today, large producers (400-6,000ha) consist of 90% of the production in Ghana, with 90% of their farmland for MD2.

Subsidies for fertiliser purchase are a significant help for pineapple producers. Since 2008, the government has subsidized 35% of the price of the purchase of NPK, urea and ammonium sulphate, contributing to the reduction of production costs<sup>83</sup>.

Pineapples are produced across Ghana but since they are mainly for export, production in the coastal area tends to be larger scale, especially in the Accra Plains across Central and Eastern Regions. Among such mass producers, there are companies like Golden Exotic that produce other fruits for export such banana, in addition to pineapples. Businesses that can export multiple types of fruit are expected to increase expand in the future.



**Fruit juice products**

<sup>82</sup> Karina Fernandez-Stark, et al, 2011, *The Fruit and Vegetables Global Value Chain*, [http://www.cggc.duke.edu/pdfs/2011-11-11\\_CGGC\\_Ex.Summary\\_Fruit-and-Vegetables-Value-Chain.pdf](http://www.cggc.duke.edu/pdfs/2011-11-11_CGGC_Ex.Summary_Fruit-and-Vegetables-Value-Chain.pdf)  
OMIC, 2009, *Report of Baseline Study on Policy Consistency on ODA and Agriculture Trade (Spice and Vegetable fat)* [http://www.omicnet.com/omicnet/reports/consul/4.%20ch\\_1.pdf](http://www.omicnet.com/omicnet/reports/consul/4.%20ch_1.pdf)  
Kenya National Bureau of Statistics *Economic Survey 2015* and others.

<sup>83</sup> FAO, "MAFAP SPAAA Analysis of Incentives and Disincentives for Cocoa in Ghana", Apr. 2013

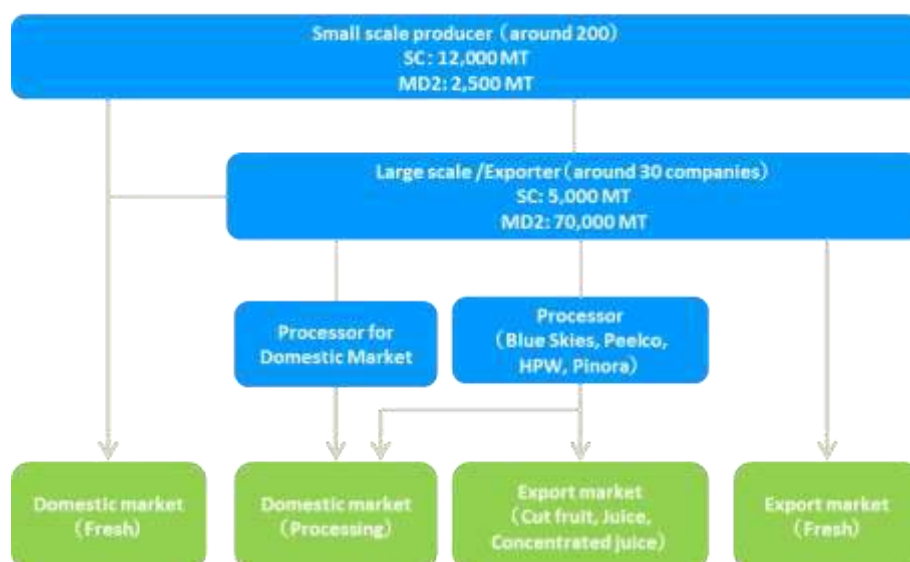
## Fruit and Vegetables Value Chain

The main input suppliers for fruits and vegetables are Chemico, Agrimat and Wienco. Those companies have direct contracts with fruit farmers to sell inputs. Along with the expansion of the pineapple business, an industry organization was formed (Sea-Freight Pineapple Exporters of Ghana) to organize and manage the increasing number of exporters and to promote exports. Currently, there are 25 exporters who are also large-scale commercial pineapple producers. The major producers-exporters include Blue Skies, Greenspan Farms, Chartered Impex, Koranco Farms, Bomarts Farms, Golden Exotics and Jet River Farms. Most of these large companies were founded by pineapple producer cooperatives and that is why their production area is large. While there are companies like Farmpine that work with multiple producer cooperatives to develop a supply system, some pineapple producers quit producing after decline in pineapple export, causing pineapple supply shortages.

Of the MD2 pineapple produced, 50-60% are for export and the rest is sold to Blue Skies and others who process them into juice and cut fruit. While Blue Skies is the largest company, there are processors such as Peelco and HPW that produce products for domestic consumption. Pinora is the only brand that exports condensed pineapple juice. Small-scale producers still grow the SC variety even today for the domestic market and for Blue Skies.

There are 14 pineapple exporters. To compete with Costa Rican pineapples, transition to MD2 cultivation has been promoted mainly among the large producers. Maintenance and improvement of the refrigeration system and modernisation of the packing line have been also promoted to further improve quality.

**Figure 27 Exported Fruit Supply Chain**



Source) Promar Consulting

## Challenges in the Fruit and Vegetable Value Chain

Three changing consumer preferences in pineapples of consumers in Europe, Ghana's main export destination, has had a significant impact on pineapple production in the country. Only large producers have been able to adjust to this change in preference, while small-scale pineapple producers are still struggling

with to transition to the preferred variety.<sup>84</sup>

In addition to the replanting, productivity is also an issue. Even though productivity has improved mainly among the large producers, the yield is still low (60 tons/ha), only half the yield of Costa Rica.

The difficulty of differentiation against competitors including Costa Rica is probably another issue. There are many large Ghanaian pineapple producers that focus on high price tiers in the European market and work on quality improvement. The six major companies are all fair-trade certified, which is well regarded among European consumers, and more companies are considering initiatives to improve quality.

### **Opportunities in the Fruit and Vegetable Value Chain**

Like cacao beans, fruit such as pineapples is mainly targeted at developed countries, particularly Europe. Therefore, demand for cold chain facilities and equipment to secure quality of produce is high, as are equipment and services that are able to withstand the power outages and voltage instability in Ghana.

#### **□ Provision of Materials and Equipment for Processing for Export**

The main markets of fruit products are overseas. Therefore, processors have to meet the high quality standards of Western countries and require high-quality raw materials (pineapples) and equipment to do so, as well as equipment suppliers who can provide domestic follow-up and repair services.

#### **□ Cold Chain Equipment and Infrastructure**

In order to export fresh and cut fruit, refrigeration systems must be installed. In particular, temperature control from the farm to warehouse and inside the warehouse is critical<sup>85</sup> since it affects the shelf life of pineapples. Therefore, business opportunities in cold chain infrastructure are considered to be large. At the moment, the refrigeration equipment in the Accra airport used for airfreight can be only set to one temperature but since the ideal cooling temperature differs by crop, diversification of cooling warehouses in the airport and the port is desired.

#### **□ Equipment Adapted to Unstable Power Supplies**

In addition to the development of the cold chain, there is high demand for equipment and technologies that are able to function in an environment of uneven power supply and unstable voltage.

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<sup>84</sup> FAO, "Analysis of Trade Impacts on the Fresh Pineapple Sector in Ghana", 2013.

<sup>85</sup> It is however reported that the thermometer approved by the Ghana Standards Authority is higher than the thermometers sold in Europe (FAO, 2013)



### 3.2.5 Meat

#### Overview

The livestock and poultry industry in Ghana expanded significantly in 2014. According to the government of Ghana, the industry grew by 5.3% in 2014, exceeding the target of 5.1%. However, the market is expanding faster than the growth of domestic supply, which makes Ghana a net importer of meat. Annual consumption per capita has increased from 4kg in 2010 to 6kg in 2012. Of this, 40% is poultry consumption and the rest is fish and other meats. According to FAO, meat demand in West Africa will keep rising to eightfold the current amount by 2050<sup>86</sup>. Ghana is not an exception. Accelerated urbanisation has changed

consumption patterns and increasing income has driven the consumption of animal protein. Furthermore, more fast food outlets are selling chicken due to the expansion of shopping malls, increasing the demand for meat in urban areas. The livestock industry in Ghana must grow at 5-6% in order to keep up with demand.

To promote the poultry business, the government of Ghana established the Ghana Broiler Revitalisation Programme Steering Committee in 2015, aspiring to develop poultry value chain, including improved inputs, infrastructure and animal feed. According to USDA, while Ghana's poultry production was 100,000 tons, domestic consumption was 175,000 tons; thus slightly less than 60% of the poultry in the market was produced domestically<sup>87</sup>. Based on the fact that the domestic self-sufficiency ratio was 80% in the 1990s, we can see that dependency on imports has become stronger. The number of domestic chickens exceeded 68 million in 2014 and the number is still increasing. The government of Ghana aspires to be completely self-sufficient in poultry. The government requests importers to import no more than 60% of Ghana's overall chicken meat and to fulfil the remaining demand with domestic poultry. Therefore, an increase in domestic poultry production is expected<sup>88</sup>.

The government of Ghana has developed the 5-year Ghana Poultry Programme, funded by USDA, and has implemented a programme to improve the productivity and capability of the poultry industry through a partnership with the US NGO

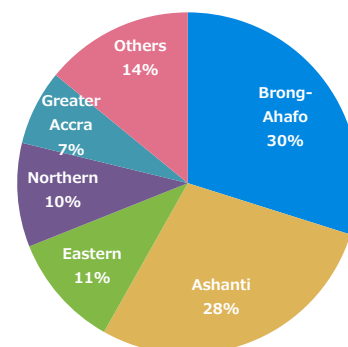


Figure 28 Number of Poultry by Area

Source) FAO



Imported frozen chicken from Brazil



Frozen and processed chicken products and a chicken dish at a restaurant

Source: Promar Consulting

<sup>86</sup> Oxford Business Report, "The Report, Ghana 2016", 2016

<sup>87</sup> According to FAO domestic self-sufficiency ratio was about 19% in 2010 (FAO 2013)

<sup>88</sup> Netherland Enterprise Agency, "Analysis Poultry Sector Ghana", 2015

TechnoServe.

Poultry farming is most common in the central to northern part of the country, but most poultry is either for family consumption or sale to regional markets. Commercial poultry production has been developed in urban areas, particularly in the areas around Kumasi and Accra. In the north, guinea fowl production for domestic consumption is particularly popular. Traditional poultry products have been chicken eggs but since the demand for meat has been growing, recently many large-sized producers have focused on the broiler business while farming villages still mainly produce chicken eggs.

### **The Meat Value Chain**

95% of the poultry industry is composed of small-scale (50-5,000 chicken) and middle-sized producers (5,000–10,000 chickens), for total of 1,500 producers. There are about 20 large-scale commercial producers (10,000 chickens or more). In farming villages, in parallel to crop cultivation, livestock are kept as a type of 'insurance' in case of poor harvest. Cattle are also often used as draft animals. Large poultry producers often have animal feed plants and slaughterhouses on the premises of their chicken farms.

One of the most significant challenges of domestic production is obtaining animal feed. Securing raw materials domestically for feed production is difficult. Ghana imports fish powder, soybeans, blended animal feeds and premixes. White maize is one feed material produced domestically thus can be procured. It is said 30% of the domestically produced white maize is used in the poultry business<sup>89</sup>. In addition to animal feed, vaccinations are also key inputs. Vaccinations approved by the Ghana Veterinary Services are purchased by private animal health companies which are then sold to livestock and poultry producers.

Animal feed takes up 60% of the production cost of poultry and health and hygiene management, including vaccinations contributes an additional 22% of the production cost. As a result, domestic chicken meat is 30-40% more expensive than imported chicken meat by<sup>90</sup>. Major commercial chicken ranches include Unity Farms, Akate Farms (Kumasi) and Darko Farms.

Since cheap frozen poultry meat of sufficient quality can be easily imported from other countries such as Brazil and most modern supermarkets import directly, the domestic poultry market is largely limited to farming villages and informal sectors.

In addition to animal feed, a large amount of hatching eggs is also imported from Europe, US and Brazil.

The shortage of slaughterhouses is also an issue. Chickens are usually either slaughtered in household backyards or a local market. Slaughterhouses that meet hygienic standards are limited to the urban areas in Accra and Kumasi.

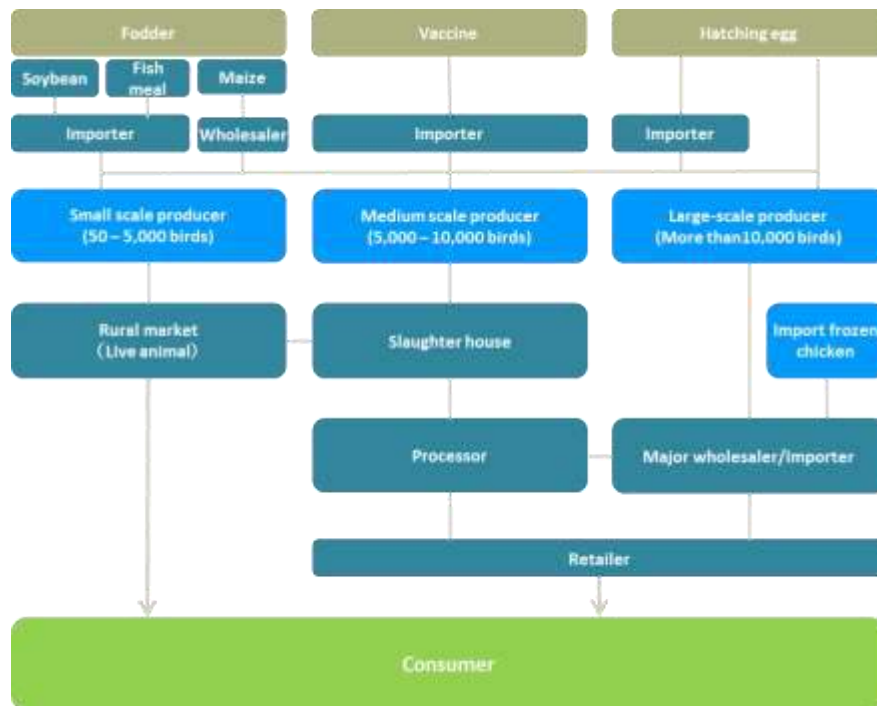
Along with the increase in meat demand, more suppliers who process fresh chicken meat into sausages and nuggets are seen.

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<sup>89</sup> Netherland Enterprise Agency, "Analysis Poultry Sector Ghana", 2015

<sup>90</sup> Netherland Enterprise Agency, "Analysis Poultry Sector Ghana", 2015

**Figure 29 Livestock (Chicken) Supply Chain**



Source) Promar Consulting

### Challenges in the Meat and Poultry Value Chain

Securing animal feed is an enormous challenge in the poultry business, particularly feed ingredients that are difficult to produce in Ghana, such as fish powder or soy powder. These rely heavily on imports. Purchase of animal feed requires access to loans, which imposes a high hurdle to small-scale producers.

Supermarkets import frozen poultry, which is consumed mainly in urban areas, where it is the preferred meat. Ghanaian citizens regard domestic chicken meat as tough while Brazilian chicken meat is tender.

### Opportunity

Business opportunities in the meat industry mainly poultry exist around provision of inputs, introduction of value-added cutting equipment and provision of materials and equipment for establishment of cold chain. In particular, demand for the improvement of quality to compete against the rapidly increasing imported frozen poultry is considered to be high.

#### □ Increased accessibility of inputs through partnerships with NGO

USDA is working with the NGO Technoserve to develop a comprehensive system for providing access to loan and supplying appropriate animal feed. Development of a similar framework by private companies is considered to be possible. White maize, an important feed ingredient, can be procured domestically. However, storing the white maize is costly. Since many small-scale producers do not own warehouses, they only purchase white maize as needed, in small amounts which is not cost effective. Appropriate storage is considered to help reduce the production cost for livestock and poultry producers.

#### □ Cutting machinery for processing value-added products

Imported chicken meat not only tastes better to Ghanaian consumers, but it is also easier to cook since already being cut, which is different from domestic poultry. Therefore, cutting machines for domestic poultry processing is regarded as a promising opportunity, if prices are realistic. Machinery and equipment that can deal well with the unstable power supply would be one way to differentiate from cheap machinery imported from other countries that regularly break down.

#### **❑ Cold Chain Equipment and Infrastructure**

Although the cold chain is not well developed in Ghana, demand for improved refrigeration and cold chain infrastructure, especially for meat, is expected to rise. As mentioned above, the challenges are instable electricity and voltage.

## 3.3 Opportunities in Cross-Sectoral Areas

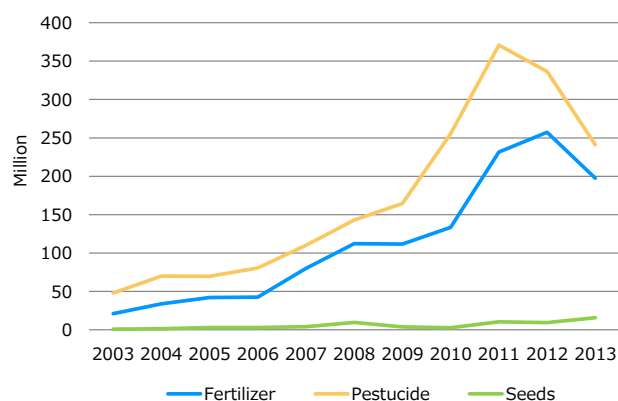
This chapter discusses the three cross-sectoral areas identified in this study. These areas were chosen based on analysis of the product sectors as well as considering areas where Japanese companies have expressed interest or may have competitive advantages:

- Agricultural inputs (fertilisers, agrichemicals, seeds)
- Agricultural machinery and general food processing machinery
- Distribution, cold chain, packaging and consumer product development

### 3.3.1 Agricultural Inputs (Fertilisers, Agrichemicals, Seeds, Animal Feeds, Veterinary Drugs)

In Ghana, many types of inputs rely heavily on imports. However, the recent discovery of natural gas has generated a hope for construction of new fertiliser or agrochemical plants in Ghana in the future.<sup>91</sup> While major foreign fertiliser and agrochemical brands sell their imported products in Ghana through distributors, blending factories have also been built. In general, over the last 10 years, imports of fertiliser and agrichemicals have increased steadily, driven by the public subsidy scheme. However, imports have dropped in the past few years, due to the recent price increases related to the weak local currency and a reduction of the government subsidy for fertilisers and agrichemicals. China's large agrochemical manufacturer has built a blending factory in Ghana, which is now resulting in an increase in the import of raw materials. In particular, the use of agrochemical on export crops such as cacao, oil palm and cotton has been seen, along with increased usage on grain such as maize.

**Figure 30 Imports of Fertiliser, Agrichemical and Seed**



Source: ITC

#### Fertilisers

Since the introduction of the Fertiliser Subsidy Programme by the government of Ghana in 2008, imports of fertilisers have increased significantly. While use on a wide variety of grains has increased, this increased usage is putting pressure on government funds. Out of the government's budget of 110 million US dollars for the agricultural sector, 20 million US dollars is budgeted for FSP, which about one-fifth. The scale has had to be reduced due to financial difficulties. The



A wholesaler of agricultural inputs in Kumasi

<sup>91</sup> Government of Ghana, "GSGDA II, 2014-2017", Dec. 2014

government had subsidized 50% of the purchase price per producer when 10 bags of 50kg blended fertiliser and 5 bags of urea were purchased. The subsidy has dropped to 20%<sup>92</sup>.

Since the introduction of FSP, the national fertiliser application rate has increased. According to the Ministry of Food and Agriculture, the amount of fertiliser per hectare has increased from 8kg in 2008 to 12kg in 2013. However, the number of producers who use fertiliser is limited. According to the USAID, 54.8% of the producers do not use fertilisers while 31.2% use inorganic fertilisers, 12.2% use organic fertilisers and 1.8% use a blend of both<sup>93</sup>.

FSP in Ghana plays a significant role in the increase in yield. The yields of maize and soybeans have risen from 16.2kg to 19.6kg/acre (maize) and 7kg to 8kg/acre (soybeans). Fertiliser usage is particularly high in cacao, oil palm and cotton cultivation, while application on rice and sorghums is also seen in the north.



A wholesale shop which displays fertiliser samples

Fertilisers are imported through the port of Tema, then either stored or divided into smaller packs at the warehouses close by, before transported to Kumasi. Kumasi is the central distribution hub for inputs and where the largest number of dealers operate. It has the largest market in West Africa, with buyers coming from Ghana as well as other countries. Wholesalers who trade inputs set up shops nearby the market, selling their fertilisers and pesticides. Fertiliser and agrochemical dealers do not trade animal feed<sup>94</sup>. Importers do not sell directly to end-users, but instead sell products from their own warehouses to wholesalers.

There are 8 large fertiliser importers, around 50 wholesalers and close to 4,000 retailers<sup>95</sup>. The largest company is multinational Yara, which owns a distribution network across the country and a fertiliser blending factory close to the port of Tema. Yara has established a company in Ghana, selling fertilisers to countries in West Africa. Sidalco is the largest domestic brand and it sells 5 types of fertilisers and imports from UK. Sidalco imports bulk fertiliser and packages at a plant near Tema for retail. The largest agrichemical brand Kumark will also launch a fertiliser product in 2016.

While the consumption of fertilisers is closely tied to the Ghanaian government's subsidy programme, the total volume of fertilisers used is expected to increase as the agriculture sector modernises. Since a distribution network is already established, distribution of fertiliser from Ghana to West Africa is possible.

## Agrichemicals

Similar to fertilisers, agrichemicals solely rely on imports. The most commonly used agrichemicals are pesticides mainly in the production of maize, vegetables and cacao beans<sup>96</sup>.

Close to 50 agrichemical importers are estimated to exist in Ghana. Recently, the largest Chinese agrichemical brand Wynca constructed a repacking plant in the central Ashanti Region, and it has become

<sup>92</sup> Oxford Business Report, "The Report, Ghana 2016", 2016

<sup>93</sup> Oxford Business Report, "The Report, Ghana 2016", 2016

<sup>94</sup> [http://gssp.ifpri.info/files/2010/06/krausova-and-banful-2\\_overview-ag-input-dealer\\_june2.pdf](http://gssp.ifpri.info/files/2010/06/krausova-and-banful-2_overview-ag-input-dealer_june2.pdf)

<sup>95</sup> The World Bank, "Agribusiness Indicators: Ghana", Report Number 68163-GH, Apr. 2012

<sup>96</sup> [http://gssp.ifpri.info/files/2010/06/krausova-and-banful-2\\_overview-ag-input-dealer\\_june2.pdf](http://gssp.ifpri.info/files/2010/06/krausova-and-banful-2_overview-ag-input-dealer_june2.pdf)



the largest player in the industry with 40% share in the agrichemical market. The plant produces glyphosate, which is in high demand, and is also equipped with a knapsack sprayer production line required in farming. Wynca products are cheap and today a number of wholesalers refer to its price as the benchmark for agrichemical prices<sup>97</sup>. Besides Wynca, other Chinese agrichemical brands also sell pesticides, mainly in Kumasi.

The largest domestic brand is Kumark, which has its head office in Kumasi. Kumark has warehouses and packaging facilities near Tema port and holds a market share of 50% in glyphosate products and 30% in other agrichemical products.

Although the use of agrichemicals has increased gradually, the lack farmers' knowledge about agrichemicals is slowing further growth. There have been deaths reported due to misuse of agrichemicals<sup>98</sup> and farmer education on proper use of the products is required. Large brands like Kumark hold events to educate farmers; however, information about agrichemicals via word-of-mouth is still most common in many areas. This results in misuse of agrichemicals, such as using the same agrichemicals on different crops or inappropriate storage methods.

Like fertilisers, approval of the Ghana Environmental Protection Agency must be obtained to register new agrichemicals. Though the usual approval process takes about 2 years, approval for generic agrichemicals can be obtained within a month or so, with only document screening. Among agrichemicals, demand for herbicides in particular is expected to rise.

Because, generally, agrichemicals are purchased as bulk, many importers have repacking plants close to the port of Tema. This pattern is expected to continue and in increasing demand for materials and equipment for agrichemical packaging.

## Seeds

In Ghana, seeds are usually harvested and reused by farmers. However, since large-scale farmers do import seeds, improved seeds are used more often in the coastal and central areas where commercial production is most common and used less frequently in the north of Ghana. Usually, seeds are sold by the importers to the farmers directly and agrichemical wholesalers rarely sell seeds. The state-owned Crops Research Institute and the Savannah Agricultural Research Institute produces improved seeds, however quality of the seeds is low due to the Institute's aging equipment and materials<sup>99</sup>. Maize uses the largest amount of improved seeds, about 19% of the crop acreage. Improved seeds for rice, tomatoes, peppers and onions exist, but are under 10% of the total seeds. Major seed players include foreign companies Wenco and Agriserve.

The government of Ghana established the Plants and Fertiliser Act in 2010 to privatise the production of improved seeds by private companies, but production has not yet become popular because of the lack of support measures by the government for the use of these improved seeds (unlike fertilisers) and the lack of distribution networks. While fertilisers wholesalers expanded across the country mainly from the hub of Kumasi, the seed trade is smaller, with less supply and demand.

With privatisation of the market, import and domestic production of improved have been accelerated,

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<sup>97</sup> From the interviews

<sup>98</sup> <https://www.christianaid.org.uk/images/ghanas-pesticide-crisis.pdf>

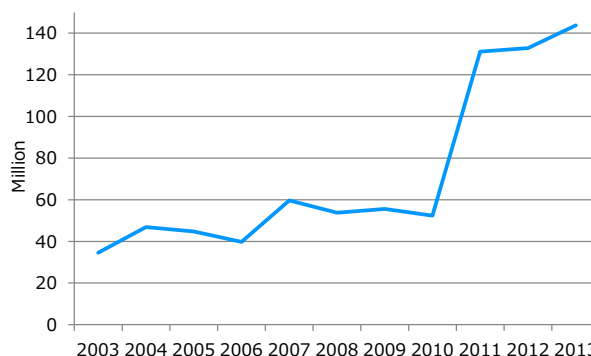
<sup>99</sup> The World Bank, "Agribusiness Indicators: Ghana", Report Number 68163-GH, Apr. 2012



however, a lack of education on the benefits of using good seeds and the need for a stronger distribution system are the main issues.

### 3.3.2 Agricultural Machinery and Food Processing Machinery

Agriculture in Ghana is still labour intensive with low mechanisation. However, use of machinery such as tractors has increased over the recent years, mainly among large-sized producers, improving the productivity. Most agricultural and food processing machinery is imported. In the area of agricultural machinery imports, tractors are the most common, especially 55-75 horsepower tractors. While many multinational farm machinery brands sell products through distributors, cheap Chinese machinery which has been recently imported dominates the market. At the same time there is an emergence of dealers providing value-added services such as after-sales service and repair for customers, indicating a certain level of demand for value-added services.



**Figure 31 Import of Agricultural Machinery**

Source) ITC

With the latest Food and Agriculture Sector Development Policy (FASDEP II), the government of Ghana aimed to improve mechanisation among small-sized producers and has encouraged mechanisation through the private Agricultural Mechanisation Services Enterprise Centers (AMSEC) since 2006. The government imports agricultural machinery and sells through AMSEC at a discounted price<sup>100</sup>. With the help of the AMSEC system, the number of producers per tractor has dropped from 1,800 in 2009 to 1,500 in 2012. AMSEC also supports construction of warehouses for rice and maize by approaching private sector companies, in order to reduce post-harvest losses and has also built 4 cooling facilities for fish<sup>101</sup>. VAT and tariffs on imports of agricultural machinery have been exempted to encourage introduction of the machinery. However, imports of machinery still require ECOWAS and health insurance tax, and in case of import of spare parts, 10% tariffs and 12.5% VAT are imposed<sup>102</sup>.

Major foreign agricultural machinery brands market their products through distributors. While brands such as Massey Fergusson, Case, Farmtrac, Landini and Mahindra operate through distributors, US John Deere offers follow-up services, repairs and sale of spare parts in Ghana through the South African dealer AFGRI. Although cheap Chinese agricultural machinery brands have entered the market recently, major producers and those with agricultural mechanisation experience are doubtful of the quality of this machinery and often prefer products with after-sales service, even if the price is higher.

The purchase of tractors has increased also among small-scale producers. Their largest challenge is access to loans and today most purchases are conducted in cash only. Other barriers to the purchase of tractors are the difficulty in procurement of spare parts and low availability of tractor leases. Even when there are tractor leasing services, borrowers may not be able to use them during the time in the season

<sup>100</sup> A 150 million US dollar support for the agricultural sector given by the government of India will be spent for the AMSEC programme in 2015 (Oxford Business Report, "The Report, Ghana 2016", 2016)

<sup>101</sup> Oxford Business Report, "The Report, Ghana 2016", 2016

<sup>102</sup> The World Bank, "Agribusiness Indicators: Ghana", Report Number 68163-GH, Apr. 2012

when they really need them, since the owners may prioritise using them on their own farms. Therefore, there still are many hurdles to the widespread use of machinery. However, there are new suppliers who are linking with dealers in Ghana to provide parts and follow-up services, and offering loans through partnerships with NGO indicating there are opportunities in this sector. In addition to tractors there is a high demand for rice mill machinery such as commercial millers and de-stoners as described in section 3.2.2. Also, a desire for machinery such as high performance liquid chromatography (HPLC) was also mentioned during the field interviews.

**Table 24 Agricultural Machineries imported by Ghana government (2007-2011)**

Year	Importation	
	Make/ Model	Qty. Imported (Units)
2007	Farmtrac-60 tractors	230
	Farmtrac-80 (2x4) tractors	76
	Maize Shellers	220
	Yukon compact tractors	120
	Vari mini systems	250
	Huricaneslashers	50
	Adela slashers	750
2008	Shakti power tillers	200
	John Deere tractors	500
	Mahindra tractors	232
2009	Farmtrac-60 tractors	200
	Kukje Combine harvester	12
	Foton combine harvester (D200)	5
	Foton maize/rice combine harvester	10
2010	China run Yuan Gin Ying Combine Harvester	10
	Thailand Combine Harvester (KT09 Rice Harvester)	2
	Irrigation Pumps and accessories	40
	Rice Mills	12
	Rice Threshers	30
	Rice Reapers	30
	Grain Prococoons (50MT)	100
	Grain Prococoons (20MT)	150
	Rice Destoner	2
2011	Foton DC200 rice harvester	70
	Foton GE20H rice/maize harvester	50**
	Cabrio compact tractors	50
2012/2013	Cabrio compact tractors and matching implements	100
<b>Japanese Grant Assistance-2KR programme</b>		
2007	Power tillers	100
2008	Kubota tractors	78
	Water pumps	16
	Rice Mills	20
2010	Tractor and matching implements	125
2011	Combine harvester	2
	Rice threshers	35
	Rice reaper	35
	Rice Mill	10
	Irrigation Pump	40

Source) MOFA, Agriculture in Ghana, 2012

### Profile: Agya Appiah Bitters (alcoholic beverage producer)

Agya Appiah Bitters is a producer of herb-based alcoholic beverages and has the second largest share in the domestic market. It uses dried herbs and produces its own extracts. The company has 55 employees and a plant located near Accra. They sell 5 products with different herbal proportions and some are also exported to Nigeria and several other countries. Its sales balance is 70% domestic and 30% international market. Export to Ghanaian citizens living in Western countries has also increased. Due to fierce competition in the domestic market, its export volume has grown.

It procures herbs from around 10 suppliers. In addition to close monitoring of the production, the company conducts production supervision through a public institute, CSIR. The company purchases herbs from producers who have farms of about 30 hectares. Payment to producers is in cash. Agya Appiah products are directly sold to about 60 wholesalers. The end consumers are middle class and beverages in pet bottles are particularly popular. More consumption is seen at restaurants.

### Challenges

Agya Appiah Bitters imports alcohol from India. Although the payment term is 90 days, it takes 45 days to transport from India to Ghana and another 15 days to transport to the plant. Including quality check and procedure for bank transfer, 90 days is very tight. Also, cash needs to be prepared since the payment has to be made in a lump sum, which causes a severe cash flow issue. Though Agya Appiah would prefer to procure alcohol domestically, it is not possible for them to secure the production volume and quality required.

Electricity is also an issue. It is about 10% of the production cost, the second highest after alcohol cost. Even though the company uses private electric generators, it is still costly.

Processing equipment, pet bottles and labels are all imported from China. However, Agya Appiah struggle with the frequent breakdowns and low quality. There are other companies that manufacture these materials and equipment (such as French Sintex) but their prices are twice as high as that of Chinese manufacturers.

Agya Appiah also feels that higher technical capability is required to meet the quality standard required in export destinations. In particular, it needs equipment such as high performance liquid chromatography. However, it is expensive and the company does not have know-how to use it effectively.



Tanks containing alcohol from India



Materials and equipments for producing PET bottles are from China.



Herb storage warehouse

### **3.3.3 Distribution, Cold Chain, Packaging, Consumer Product and Eating Out<sup>103</sup>**

#### **Distribution and Cold Chain**

In Ghana, the majority of the distribution business is informal, but the modern retail business is still young and expected to expand in the future along with the urbanisation and increase in income. Modern supermarkets are keen to import products that are not sold in Ghana, thus they can be promising export partners for Japanese companies. Also, there are retail companies which have not yet developed their own cold chain, such as the largest brand Melcom, suggesting there are opportunities for development in the distribution chain. For example, to display chilled and frozen products at retail stores, usually small simple refrigerators or freezers are used and there may be a demand for frozen product displays inside the retailer that can preserve freshness and appeal to consumers at places such as Marina Mall, targeting high-income consumers. As modern supermarket chains expand, provision of facilities and equipment related to distribution is expected to be a promising business opportunity. Equipment used in cold chain will need to be imported, thus prompt procurement of parts and provision of after-sales services will be a way to differentiate from competitors.

While price is the top priority for many domestic businesses, energy-saving technology is preferred by export businesses as well as some modern retailers.

In addition, the airports and port have a need for refrigeration and freezers for export of fresh fruit and processed foods to Europe. These products need uniform temperature throughout the cold chain and better temperature control systems for maintaining the quality of export products.

#### **Packaging**

Most food processing businesses in Ghana do repackaging and packing. Packaging in plastic bottles and simple pouches is common. Materials and equipment required for such packaging are imported mainly from China. Labels printed in China are also imported and then applied to the packages in Ghana. While price is the priority and a large amount of cheap materials and equipment is imported, however time is wasted when there is shortage of parts or errors in printing or orders, and therefore many processors would prefer to procure domestic packaging and materials/ equipment. In addition to quality and time loss challenges, the industry also faces challenges regarding import terms and conditions (import volume and number of payments)

#### **Product Development for Consumers– Packaged Products and Eating Out**

Like its packaging, the raw materials for processed food products are often imported from other countries, mainly China. Many of the recently expanding shopping malls, and the food service companies that expand with the malls, are foreign affiliated, it is likely that much of the raw materials and equipment being used is also imported. Based on the fact that consumption of meat such as poultry is increasing as incomes increase, a fast food service model such as Toridoll's teriyaki chicken fast food chain, which has been successful in Kenya, could be a business opportunity in Ghana.

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<sup>103</sup> University of Nottingham (n.d.) 'Cold Chain Opportunity Assessments'  
<http://naturalleader.com/wp-content/themes/natllead/images/CRC3656-ColdChainOpp.pdf>

## Products for Ghanaian consumers



Yogurt ice cream (left), processed vegetable products (middle), fruit/ginger drink (right)

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## 4 SUMMARY

In this chapter, we will summarise Chapter 2 and 3 to review the business opportunities for Japanese companies in Ghana's food value chain and prospects for market entry.

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### **Overview of the food value chain in Ghana**

The estimated population of Ghana in 2015 was 27.4 million, the ninth largest in Sub-Saharan Africa. Its GDP is 38.6 billion US dollars and it has the third largest economy in West Africa after Nigeria and Cote d'Ivoire. Since the colonial period, cacao bean and gold production has led the steady growth of the economy of Ghana. Furthermore, commercial production of the oil reserves discovered off the coast of Ghana has contributed to over 4% in steady growth. On the other hand, the country faces a serious financial deficit. Ghana receives substantial assistance from foreign governments and international institutes. A significant amount of funds have been provided especially in the areas of infrastructure and productivity improvement, recently with more support from the emerging countries such as China and Brazil. Although Ghana has the potential of becoming a distribution hub for West Africa, regional trade is currently slowed, largely due to the delayed ratification process of trade agreements between countries and complex procedures at the borders.

The agricultural sector is the largest employer, consisting 21% of the GDP. 70% of the nation is agricultural land and 47% is used as cultivated fields and/or areas that grow permanent crops. The country's principal food crops are potatoes (cassava, yam), grain (rice, maize, wheat) and plantains. While potatoes and maize are self-sufficient, rice wheat, sugar and meat heavily rely on imports. The largest domestic food processing business is flour milling and throughout the food processing industry, raw materials are imported then repacked or bottled domestically. Since a large volume of the materials and equipment used in processing are imported, this significantly impacts the cost. The unstable power supply is also a continuous challenge for the processing industry.

In the retail sector, modern supermarkets have expanded over the recent years, but open air markets and traditional retailers play a significant role in the informal sectors, connecting farms with consumers in the urban areas. In addition to domestic produce, wholesalers at the markets also trade imported goods, distributing agricultural and food products across the country. Within the modern supermarket sector, local brands are strong and some even have chains across Ghana. South African supermarkets have also entered the market as tenants of shopping malls, pushing Ghana's modern distribution systems to the next stage. Although shopping malls are currently limited to urban areas, they are expected to expand nationally and bring increase in fast-food chains.

The food value chains in Ghana face multiple challenges in many cross-sectoral areas such as shortage and low use of inputs, dependency on rain-fed agriculture, insufficient access to markets or loans, vulnerability to currency fluctuation and lack of know-how. Such challenges lead to low yield, instable production, low quality and high production costs. In addition to those issues, in the area of food processing there are power supply issues and use of low-quality equipment with poor after-sales service. In particular, the serious power supply issue not only affects the food sector but the overall manufacturing sector in Ghana. In the food processing industry, unstable supply and low quality have led to higher dependency on imported raw materials than domestic raw materials. Imports are vulnerable to currency fluctuation and raise production cost. Furthermore, due to the low quality of equipment and raw materials being used it is

quite difficult for Ghana to export more price competitive products as of now.

## Business Opportunities for Japanese Enterprises

Although few Japanese businesses have entered the food value chain in Ghana, they are engaged in exports of cacao beans and shea butter, marketing of horticultural seeds, marketing of canned mackerel and provision of irrigation equipment and electricity generators for fishing boats, in addition to the Ghana Nutrition Improvement Project.

To address the challenges of the food value chain in Ghana, Japanese businesses are recommended to work with various stakeholders, rather than making an approach on their own. Organising projects by using NGOs that have connections with producers and involving banking institutions and raw material purchasers is likely to have the least risk and highest sustainability. Foreign machinery company John Deere and several beer brands have introduced new equipment and procured raw materials for processing through such frameworks.

In the area of food processing, a secure supply of spare parts for equipment, as well as follow-up services, are particularly appreciated by food processing business for export.

The table below summarises business opportunities in the FVC by sector and in the cross-sectoral areas.

**Table 25 Opportunities for Japanese Companies in the Ghanaian FVC**

Area	Production	Manufacturing/Processing	Distribution	Consumption
Situation in Ghana	<ul style="list-style-type: none"> <li>❑ Dependency on rain-fed agriculture</li> <li>❑ Insufficient access to markets</li> <li>❑ Shortage and low use of inputs</li> <li>❑ Lack of know-how</li> <li>❑ Insufficient access to loan facilities</li> <li>❑ Low-quality and unstable supply</li> </ul>	<ul style="list-style-type: none"> <li>❑ Unstable electricity</li> <li>❑ Unstable access to raw material</li> <li>❑ Dependent on imported materials</li> <li>❑ Low quality of materials and equipment and insufficient services</li> <li>❑ Insufficient access to loan facilities</li> </ul>	<ul style="list-style-type: none"> <li>❑ Lack of cold chain</li> <li>❑ Excessive reliance on road infrastructure</li> <li>❑ Unstable electricity</li> <li>❑ Low quality of equipment and materials/lack of services</li> </ul>	<ul style="list-style-type: none"> <li>❑ Expanding urban population.</li> <li>❑ Foreign products well-regarded while domestic products have a lower reputation</li> <li>❑ More oriented toward low-end consumers</li> </ul>
Opportunities	<ul style="list-style-type: none"> <li>➤ Appropriate inputs and capacity building</li> <li>➤ Post-harvest infrastructure and know-how</li> <li>➤ Improving access to loans in collaboration with NGOs</li> </ul>	<ul style="list-style-type: none"> <li>➤ Processing technologies for domestic manufactures</li> <li>➤ High-quality materials and equipment for export-oriented manufacturers</li> <li>➤ Procurement of parts and after-services</li> <li>➤ Equipment that can</li> </ul>	<ul style="list-style-type: none"> <li>➤ Develop cold chain (main cities, airports/ports)</li> <li>➤ Equipment that can handle unstable electricity supply</li> <li>➤ Railroad network</li> </ul>	<ul style="list-style-type: none"> <li>➤ High-quality retail cold storage displays cases in premium retailers</li> <li>➤ Equipment with excellent energy-saving technology</li> <li>➤ High-quality materials and</li> </ul>



	<ul style="list-style-type: none"> <li>➤ Introducing high-quality rice milling machinery and processing machinery such as de-stoners</li> </ul>	<p>adapt to unstable power supply.</p> <ul style="list-style-type: none"> <li>➤ Meat cutting equipment that can add value</li> </ul>		<p>equipment for the restaurant industry</p>
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