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A comparative analysis of cocoa production in Ghana and Nigeria: post-independence policy impact on agricultural value chains

Authors: 1. Olarinde Oluwasegun, principal investigator, University of Jos, Plateau State, Nigeria. Afrobasket-NG Consult. afrobasket@protonmail.com, +2348131227275;

2. Augustine Nyong-Ekpe, editing author, Centre for Petroleum, Energy Economics and Law(CPEEL), University of Ibadan, Oyo State, Nigeria. austineekpe@gmail.com,

3. Adeola Ijeoma Eleri, contributing author, Centre for Petroleum, Energy Economics and Law(CPEEL) LL.M, University of Ibadan, Oyo State Nigeria. adeola.eleri13@gmail.com

4. Essien O. Essien, contributing author, University of Calabar, Calabar, Cross River State, Nigeria. essienessien90@gmail.com

5. Usang, Patrick Mbang, contributing author, University of Calabar, Calabar, Cross River State, Nigeria. usangpatrick@unical.edu.ng

6. Shehu Muhammad, contributing author, Federal Polytechnic Bida, Nigeria. ibshmad@yahoo.co.uk

7. Emeka Emmanuel Hezekiah, contributing author, Centre for Petroleum, Energy Economics and Law(CPEEL) LL.M, University of Ibadan, Ibadan, Oyo State, Nigeria. hezekiah-e@yahoo.com

Abstract

A comparative analysis of cocoa production in Ghana and Nigeria was carried out to determine the importance of government policy. The progression of the value chain from cocoa beans to chocolate-the most important product- was compared. The study highlights the highs and lows of the cocoa trade in both nations over six decades. The full exploitation of raw materials produced in Sub-Saharan regions of Africa is a major problem. Cocoa was used as a case study to evaluate the impact of sustained government policy guidance on the exploration and exploitation of raw materials. Historical records of export quantity, price fluctuations, production challenges, and policy interventions were stated to give a balanced and encompassing comparison of the situation. Lists of cottage industries in the chocolate sector of both countries were added to support the argument. The factor which stood out was the consistency of government support and policies led to further exploration of the value chain.

Keywords: cocoa, chocolate, comparative analysis, Ghana, Nigeria, policy

1.Introduction

Cocoa was introduced to West Africa in the nineteenth century[1]. West African nations overtook the South American producers, producing approximately 60% of the global cocoa tonnage annually[2]. With special reference to the Ivory Coast and Ghana, these nations make up 60% of global cocoa production, and they are ranked 1st and 2nd in Africa respectively[3,4]. Ghana and Nigeria started cocoa farming at the same time in history, and both are anglophone countries, thus they bear certain similarities but their output differs[5].

Chocolates are highly sought-after consumer confectionaries and the most demanded product made from cocoa[6]. The irony is that chocolate is consumed in higher volumes in developed countries, than in the regions where cocoa production is a major source of foreign exchange and livelihood[5]. Africans from cocoa producing nations marvel at the loss of revenue and opportunity. These countries export cocoa beans, and in return they import processed cocoa in the form of chocolate and beverages. As a raw material produced in tropical rainforest regions, nations farming cocoa could benefit from the full exploration of its value chain.

Jaeger (1991) stated that it was widely recognized that government policies contributed to Africa's crises and that policy reforms could foster growth[7]. In further research, he stated that countries that had adopted and sustained policies to raise farm incentives had better agricultural performance in the 1980s, on average, than those whose policies discriminate against agriculture[8]. Ghana became independent in 1957, while Nigeria gained independence in 1960. The period after independence was critical because the decisions and policies that shaped the cocoa industry were taken in response to challenges of crop and market volatility among other problems yearning for attention.

In 2013, of the top 10 chocolate and candy producing companies globally, the company with the smallest market share earned 2.5 billion dollars[9]. The magnitude of this market suggests that more value can be derived apart from raw cocoa bean exports, by expanding into packaged chocolate exports.

2. Methodology

The study is quantitative in nature as data was obtained from the Food and Agriculture Organization(FAO) statistics website. The data consists of annual figures of cocoa beans export from Ghana and Nigeria. Tilly offers a perspective on four methods of doing a comparative analysis. The four types of comparative analysis are individualizing, universalizing, variation-finding, and encompassing comparisons[10].

Individualizing comparison involves describing the peculiar features of a case being studied. A small number of cases are contrasted against each other[10].

Universalizing comparison uses the method of comparison to develop fundamental theories with general relevance[10].

Variation-finding comparison establishes a variation or difference in a system or phenomenon by testing the intensity of different instances to draw a conclusion[10].

Encompassing comparison explains two different phenomena in relation to their different connections[11].

The encompassing method of comparison was chosen because "it places different instances at various locations within the same system, on the way to explaining their characteristics as a function of their varying relationships to the system as a whole"[10].

The comparative analysis of both countries' annual export value was compared over a five-year period in graphs, starting from the post-independence period of both nations, and citing individual government policies and production challenges common to both. Pickvance noted, "the essence of comparative analysis is to explain and understand the causal processes involved in an event, by bringing together variations in the explanatory factors or variables"[12].

Using periodic intervals, government policies were evaluated, records were compared and inferences can be drawn based on the action and inaction of both nations.

3.0 Comparative Analysis

Cocoa is a major export commodity in Ghana and Nigeria[13]. Though its success over the years was neither smooth nor linear. The case must therefore be made that implementation of sustained policies brings stability to the value chain of a commodity. Investments in local systems will always yield encouraging economic impacts. If local firms and residents interconnect trading goods and services with each other, the longer the value cycles through the region, and the higher the multiplier effect[14].

3.1 Policy at Independence

The Cocoa Research Institute of Ghana was an initiative in response to the incidence of swollen shoot disease in 1936. Situated in Tafo, Ghana, it became the station for the West Africa Cocoa Research Institute-WACRI in 1944, to serve as a research station for anglophone cocoa producing countries in West Africa[15]. A substation of WACRI was set up at Ibadan, Nigeria[5]. In October 1962, WACRI was dissolved by the member nations, Ghana, Nigeria, Sierra Leone, and Gambia after they gained independence[15]. A major stride achieved by WACRI was the transition from the Amelonado variety to the Forastero hybrid[5,16].

1961-2019

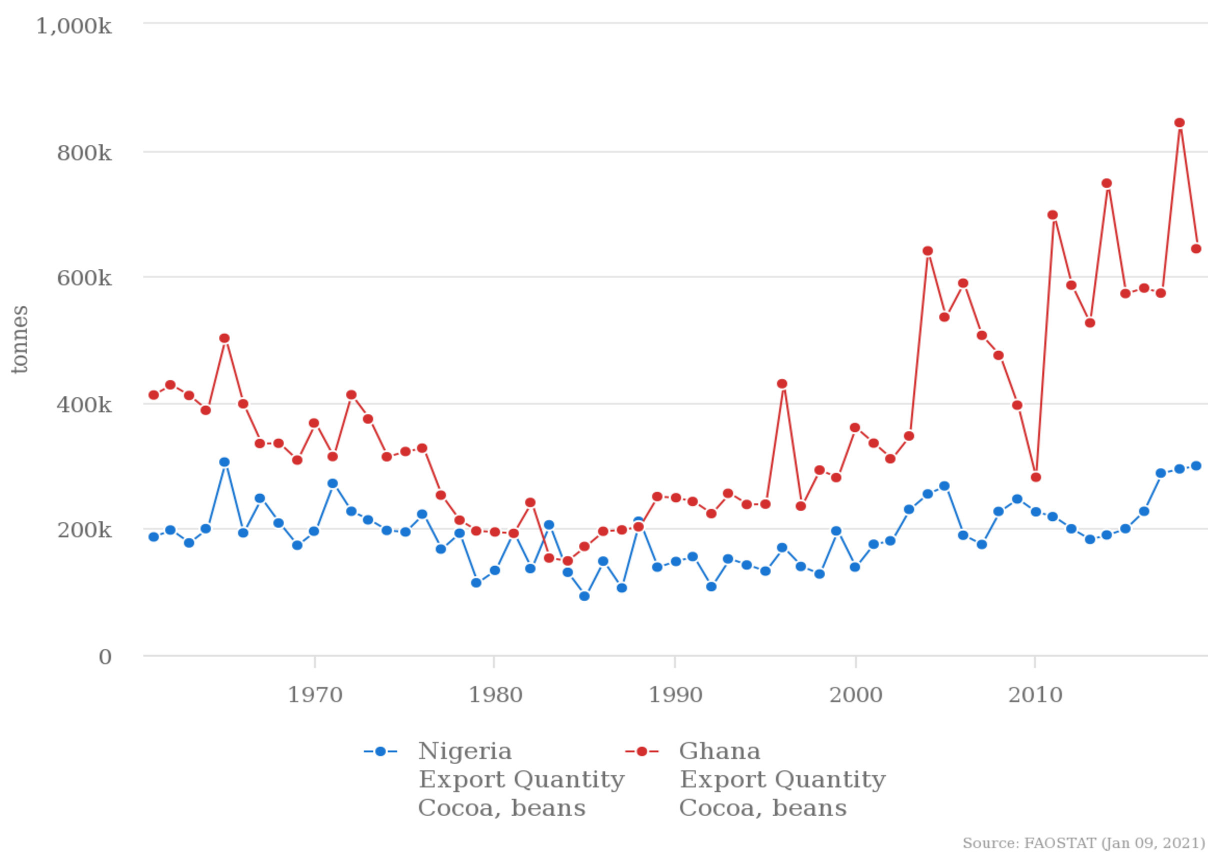

Figure 3.1

Source: www.fao.org/faostat/en/#data/qc Export quantity: Ghana and Nigeria from 1961-2019

The graph in figure 3.1 above shows the post-independence records for Ghana and Nigeria from 1961 to 2019. The period between 1980 and 1990 was the lowest period on record for Ghana, while Nigeria exceeded Ghana's cocoa export quantity during this period.

3.2 1961-1965

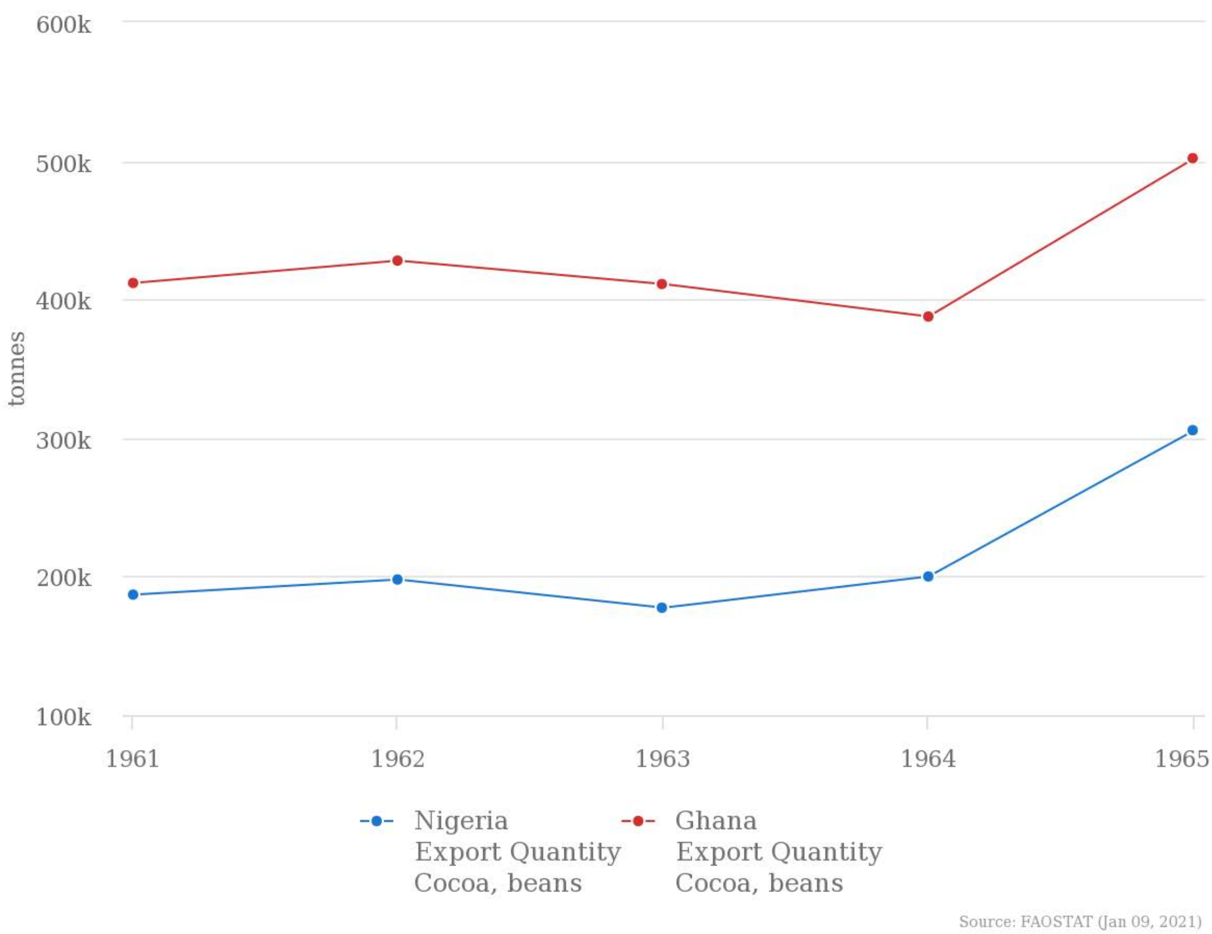

Figure 3.2

Source: www.fao.org/faostat/en/#data/qc Export quantity: Ghana and Nigeria from 1961-1965

This was the early post-independence period. Yields were sustained in a range in Ghana and Nigeria. 1965 was a peak. Ghana had a bumper harvest above 500,000 tonnes, but the global cocoa price crashed[13]. Ghana was the largest producer of cocoa in the world, while Nigeria had its highest export volume on record in 1965[5, 16]. Nigeria gave Forastero seedlings to the Ivory Coast in 1965 for commercial cultivation. Today, Ivory Coast is the largest producer of cocoa in the world using this cocoa variety[5].

3.3 1966-1970

Figure 3.3

Source: www.fao.org/faostat/en/#data/qc Export quantity: Ghana and Nigeria from 1966-1970

This period was marked by the sack of democratic governments in Ghana and Nigeria. The toll on cocoa farming had begun from the crash of global cocoa price at the international market from 1964[13]. In 1967 there was a civil war in Nigeria, which meant development policies stagnated, and the civil war ended in January 1970. Cocoa farmers in Ghana were forced by the government to accept a price set by the government. Accusations of bureaucratic incompetence were leveled against the Cocoa Board of Ghana, and this led to the smuggling of crops to the Ivory Coast[17]. In Nigeria the regional system of government was changed to a unitary system reducing the coordination and impact of government on agricultural production.

3.4 1971-1975

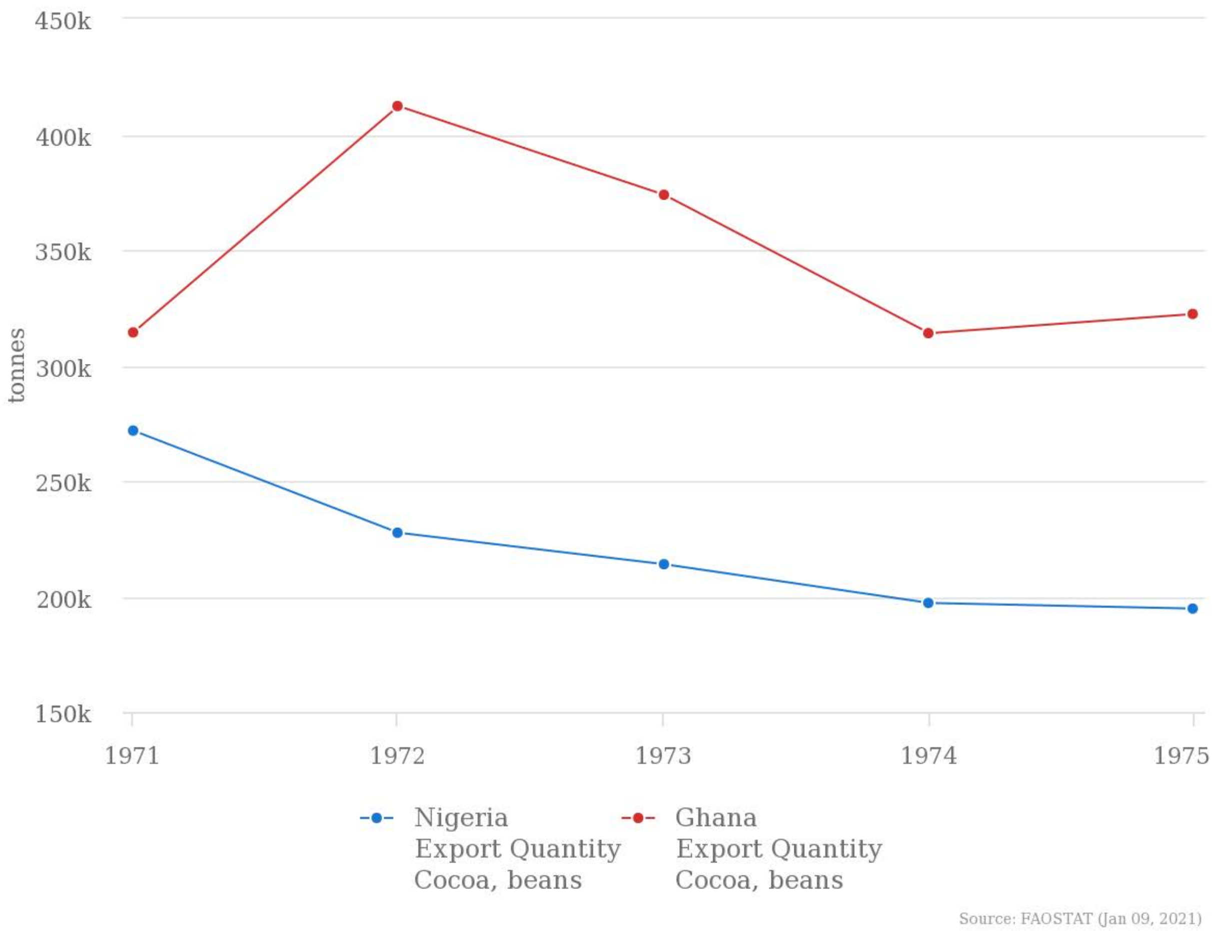

Figure 3.4

Source: www.fao.org/faostat/en/#data/qc Export quantity of Ghana and Nigeria from 1971-1975

The second republic in Ghana ended during this period. The government embarked on economic policies which stopped the inflow of capital into the economy[18]. In Nigeria, the oil boom and military rule meant that cocoa and agriculture were not major priorities.However, World Bank assisted growth projects were initiated in Nigeria to increase cocoa production in 1971[19].

3.5 1976-1980

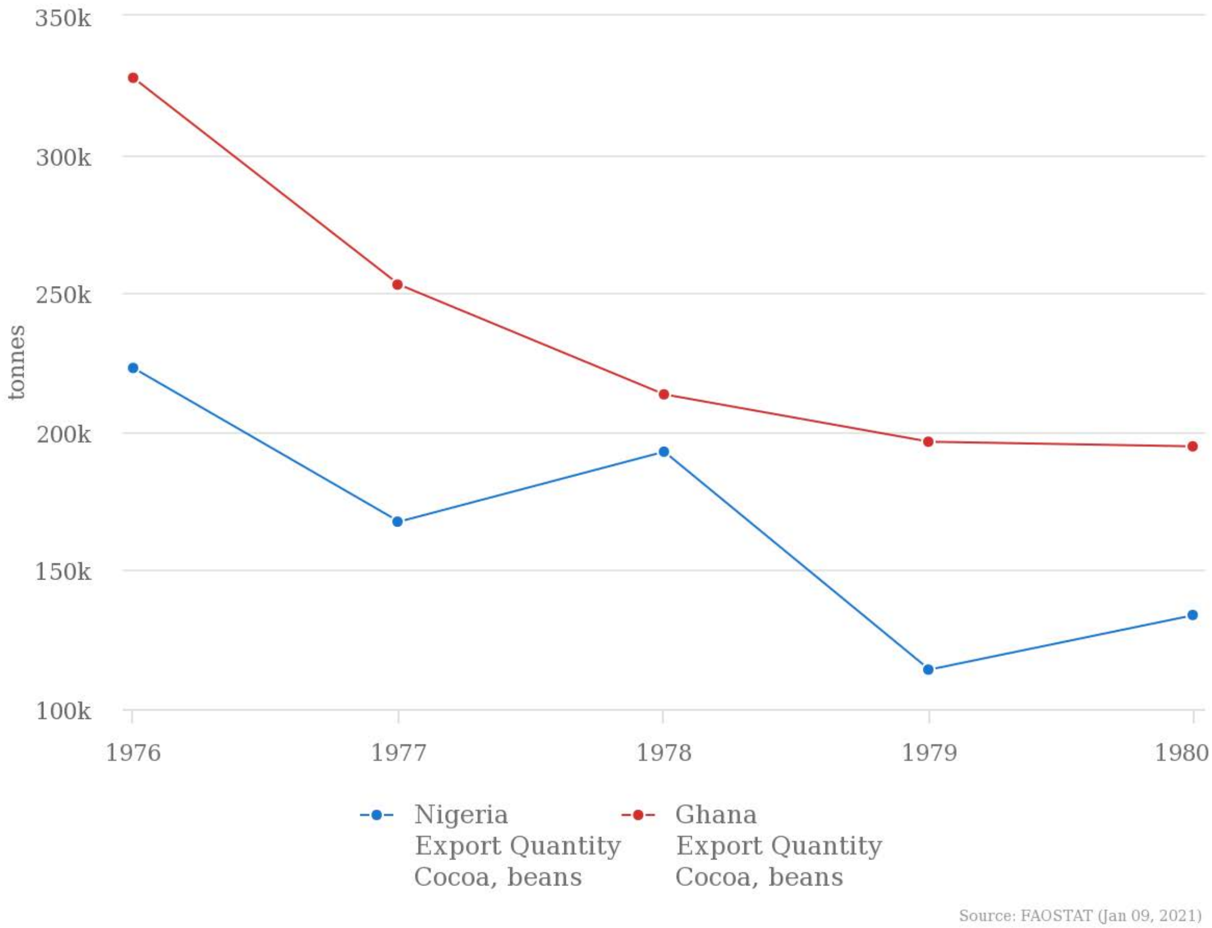

Figure 5

Source: www.fao.org/faostat/en/#data/qc Export quantity of Ghana and Nigeria from 1976-1980

The downward trend in Ghanaian cocoa production was a combination of bad government policies and leadership. The rate of inflation was high in Ghana, and the political situation made production difficult[18]. Nigeria also experienced political upheavals before the return to democracy in 1979. The global price of cocoa dropped on the world market during this period[13].

3.6 1981-1985

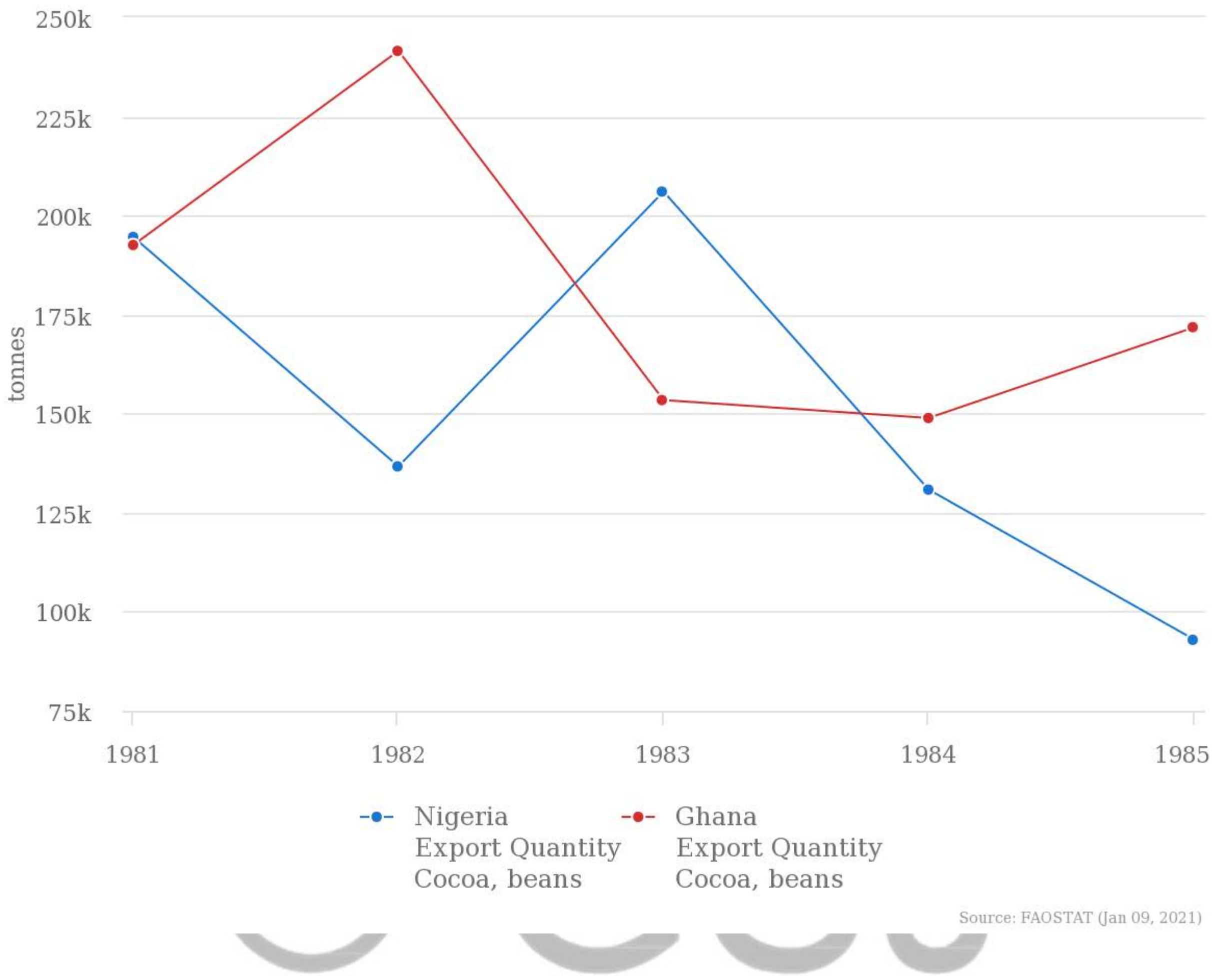

Figure 3.6

Source: www.fao.org/faostat/en/#data/qc Export quantity of Ghana and Nigeria from 1981-1985

This was one of the worst production periods in the history of cocoa production in Africa. In 1981, the Ghanaian government founded the Producing Buying Company of Ghana, a subsidiary of the Cocoa Commodity Board. Bush fires were responsible for the fall in production in Ghana, and there was a famine which also affected Nigeria. Ghana started a Cocoa Rehabilitation Project in 1983 which encouraged new and better farming practices. The Ghanaian Cocoa Management Board was renamed the Cocoa Commodity Board with a refreshed mandate in 1984. This marked the first period that Nigeria had a higher cocoa export volume than Ghana[13].

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3.7 1986-1990

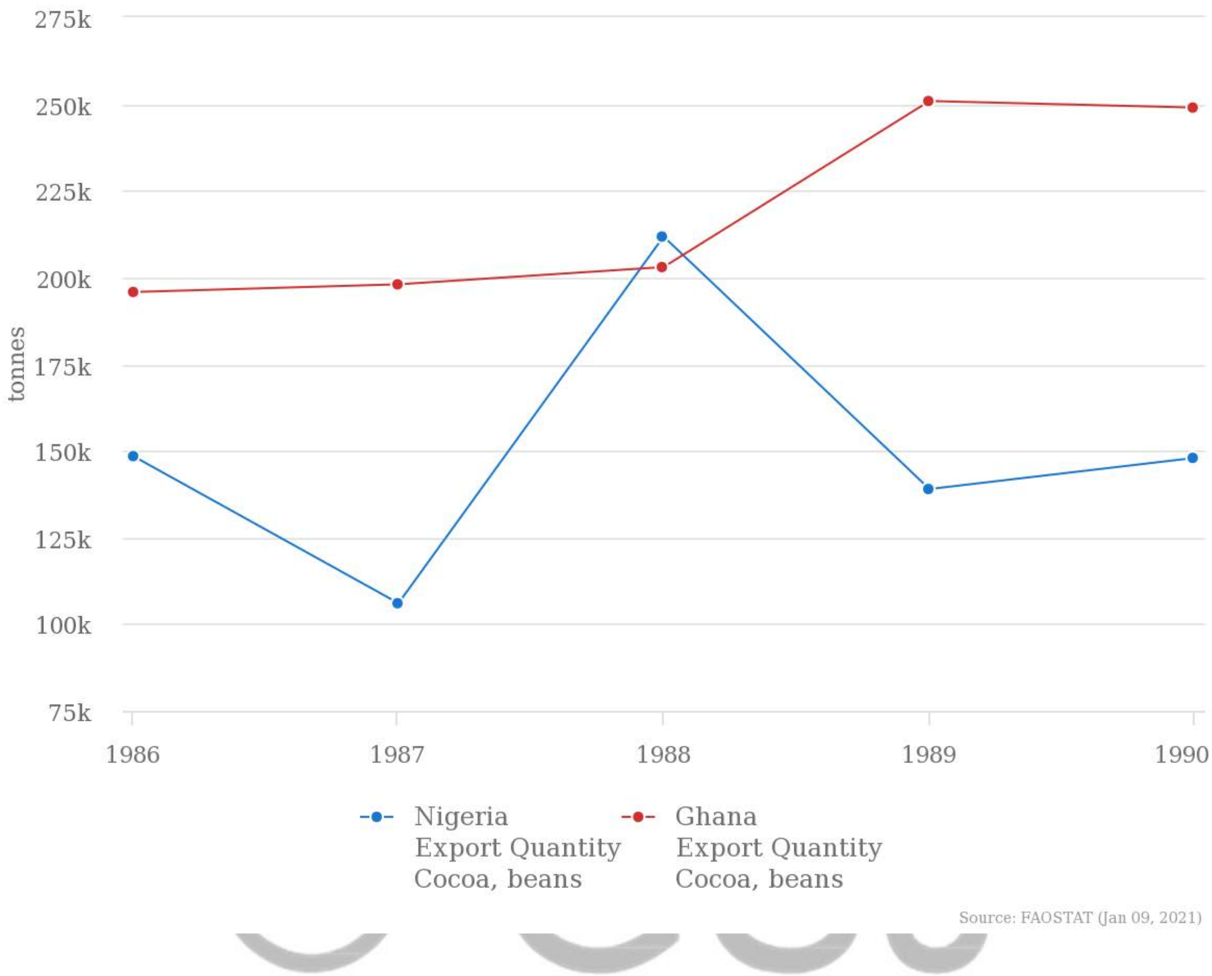

Figure 3.7

Source: www.fao.org/faostat/en/#data/qc Export quantity of Ghana and Nigeria from 1986-1990

Nigeria dissolved its commodity marketing boards to liberalize trade as advised by the IMF. In 1987, the Nigerian Cocoa Board was dissolved and it was replaced by the Cocoa Association of Nigeria-an association of stakeholders in the cocoa industry[20, 21]. Ghana did not dissolve its COCOBOD.

3.8 1991-1995

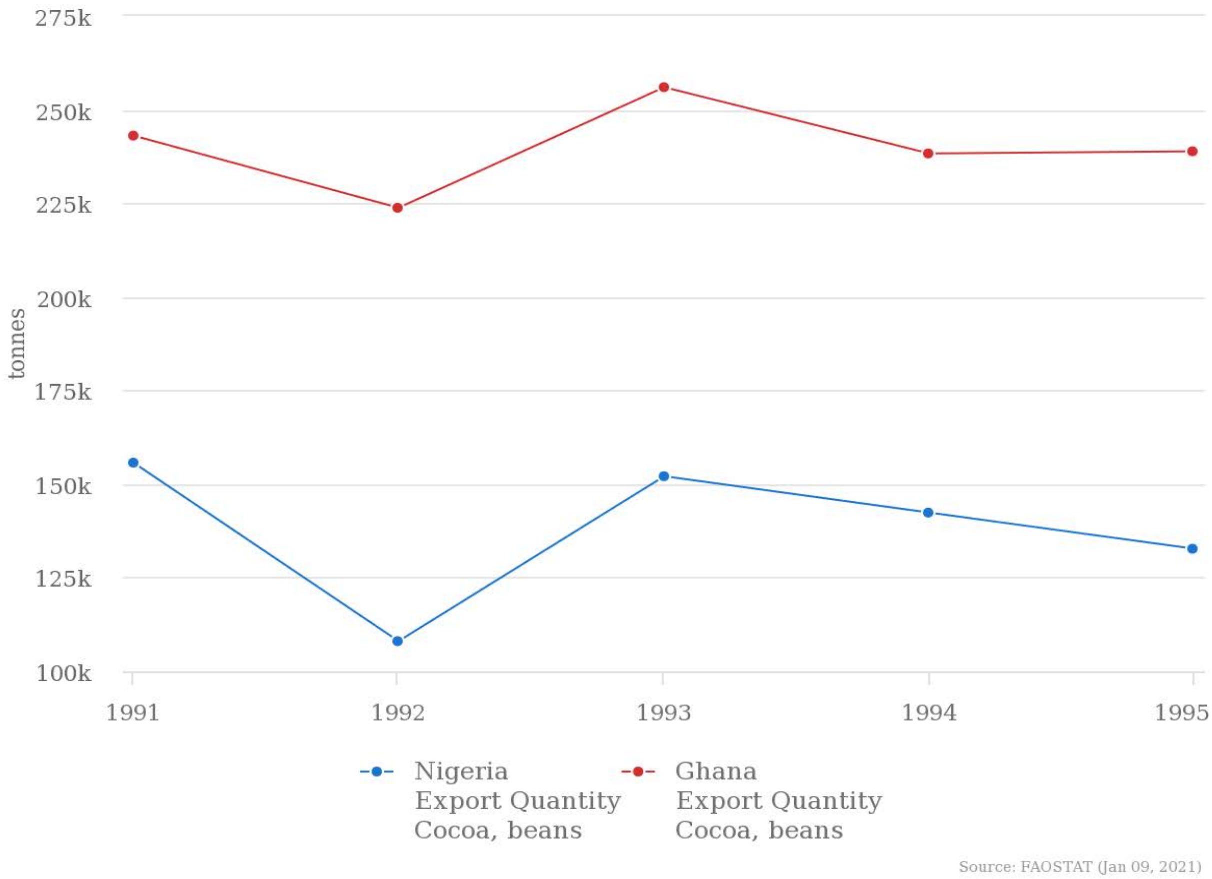

Figure 3.8

Source: www.fao.org/faostat/en/#data/qc Export quantity of Ghana and Nigeria from 1991-1995

The gains of the Ghanaian Cocoa Rehabilitation project were now evident after a period of tumult. Ghana's production capacity was in a range above 200,000 tonnes annually[13]. Nigeria however struggled under the burden of the Structural Adjustment Program(SAP)[20]. While Ghana implemented some recommendations of the SAP, the government controlled COCOBOD continued to regulate the industry in Ghana. The agency's work coupled with the atmosphere of political stability meant that Ghana's production levels remained consistent, Nigeria lost production momentum.

3.9 1996-2000

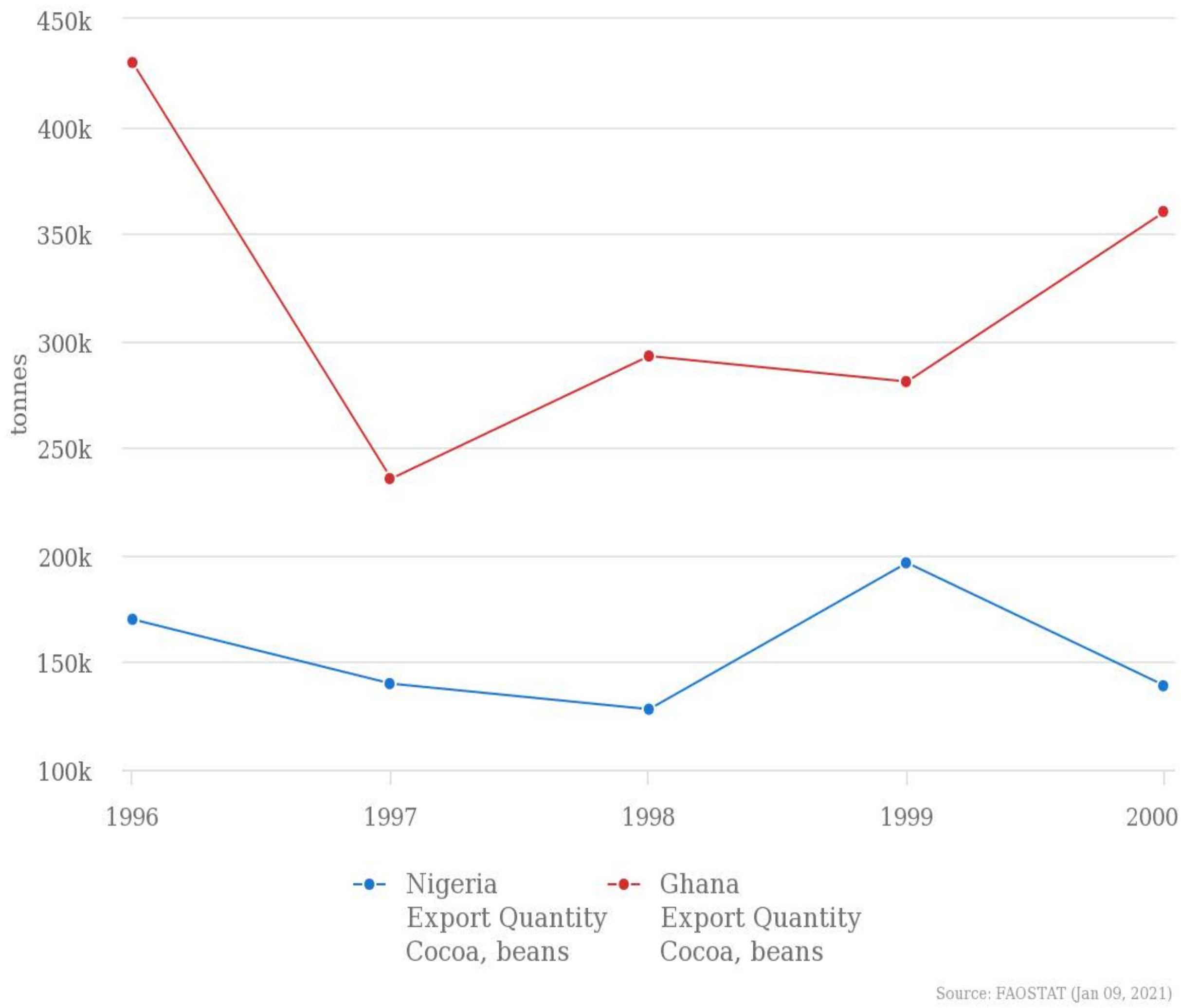

Figure 9

Source: www.fao.org/faostat/en/#data/qc Export quantity of Ghana and Nigeria from 1996-2000

There were price fluctuations on the global market, and Ghana attained a production peak in 1996 which was affected by global price fluctuation and production levels dipped. In 1999, as Nigeria returned to a democratic government, the president and the Cocoa Association of Nigeria formed the National Cocoa Development Committee to address the issue of cocoa production[22].

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3.10 2001-2005

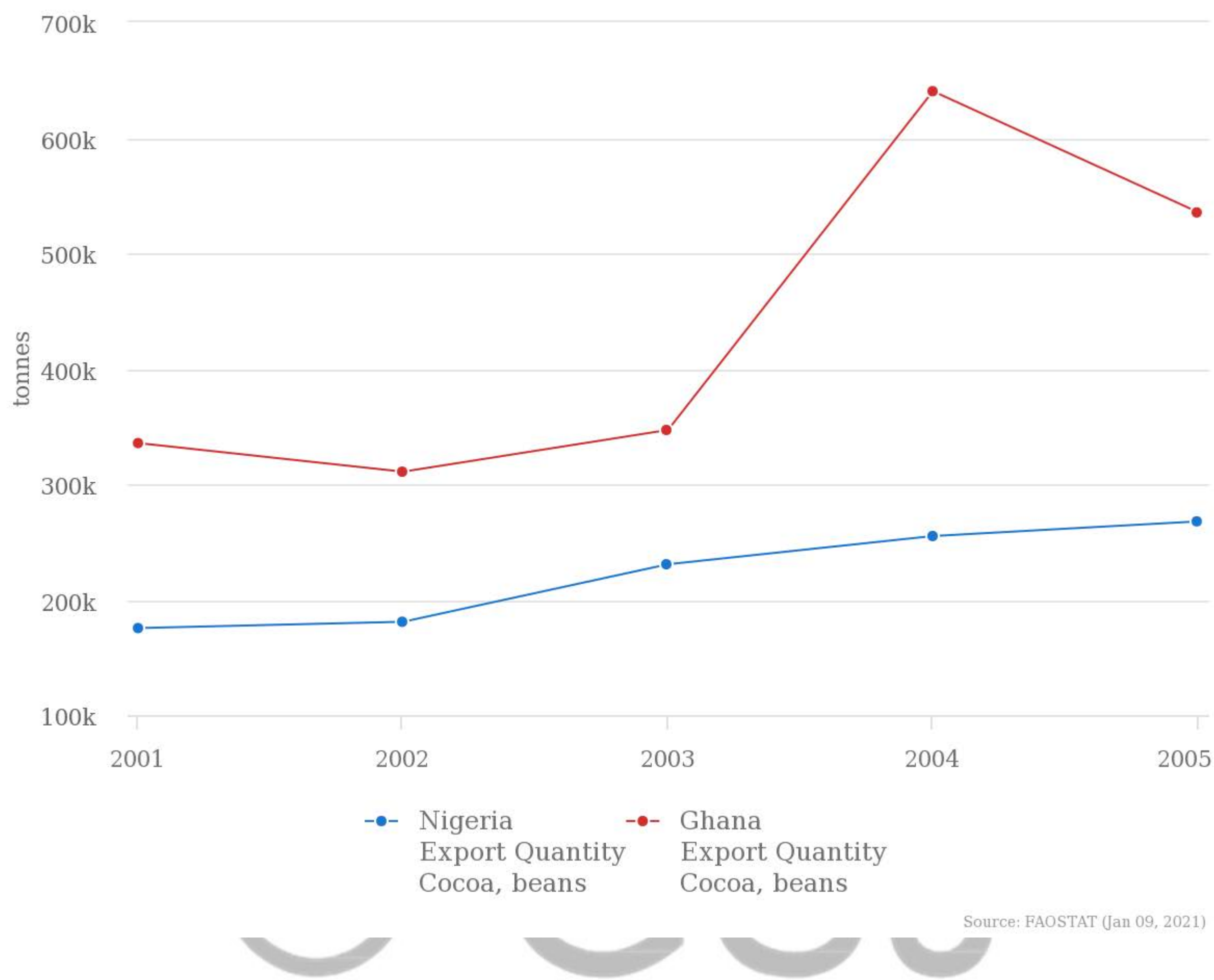

Figure 3.10

Source: www.fao.org/faostat/en/#data/qc Export quantity of Ghana and Nigeria from 2001-2005

This period showed stability because technology improvements and continued refinement of policies and procedures by the COCOBOD of Ghana yielded results[13]. In 2006 Ghana had a peak production volume above 600,000 tonnes, a level which had been difficult to attain over the years. In Nigeria, renewed government interest in revitalizing agriculture yielded positive results as cocoa production soared.

3.11 2006-2010

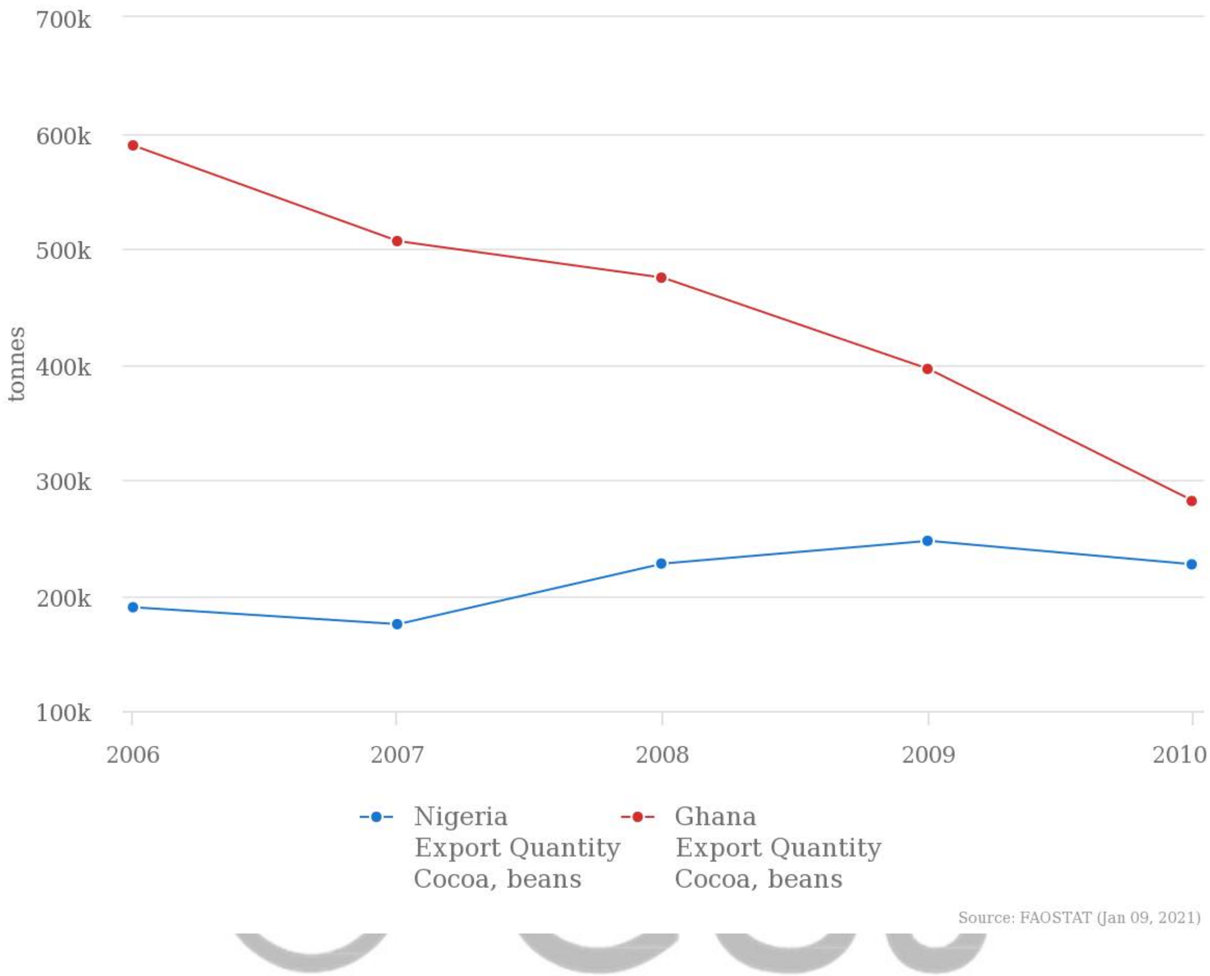

Figure 3.11

Source: www.fao.org/faostat/en/#data/qc Export quantity of Ghana and Nigeria from 2006-2010

The sudden drop in Ghana's cocoa production during this period can be attributed to the outbreak of disease over a large area of cocoa cultivation in Ghana. Nigeria sustained its production capacity but did not reach 300,000 tonnes, while Ghana had a better output in 2010 despite falling production volume.

3.12 2011-2015

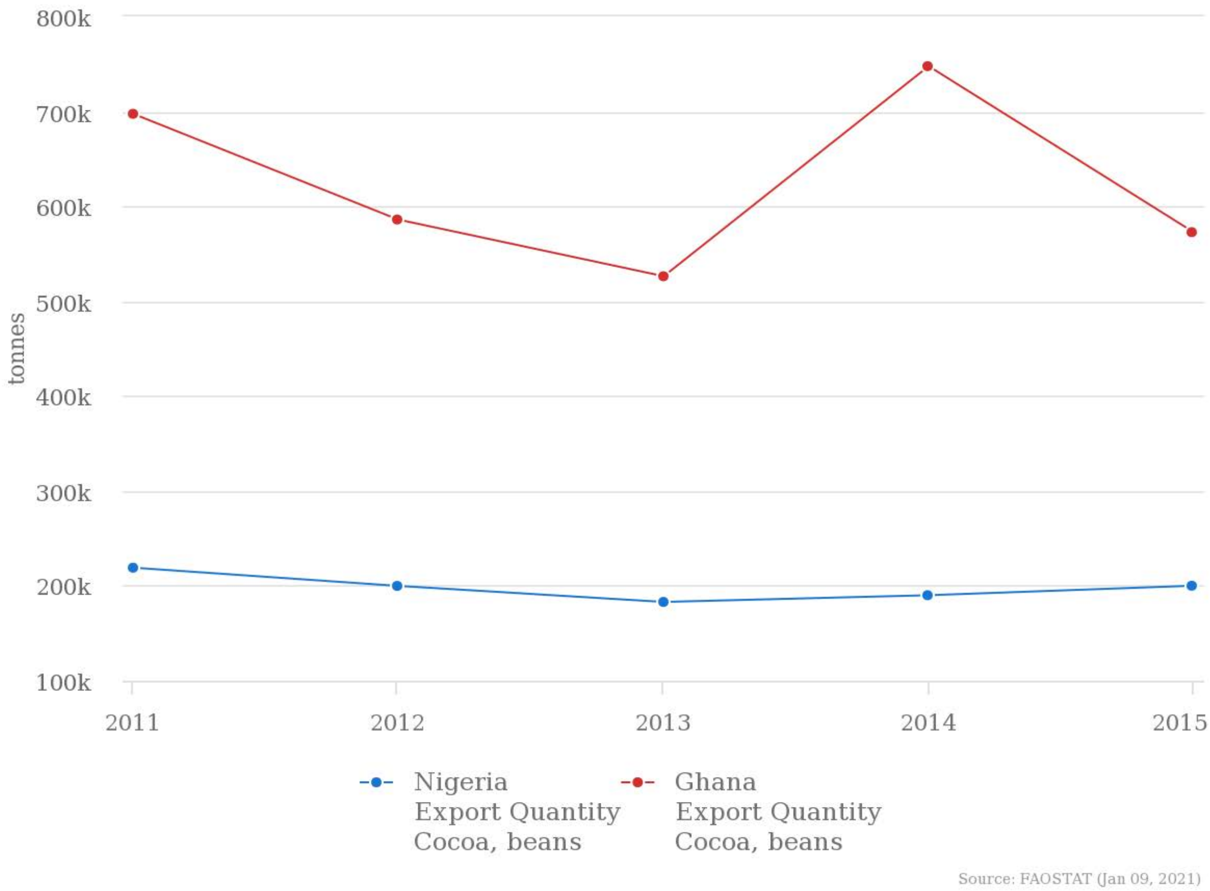

Figure 3.12

Source: www.fao.org/faostat/en/#data/qc Export quantity of Ghana and Nigeria from 2011-2015

Ghana went from below 300,000 tonnes per year to 700,000 tonnes in 2011. Production levels were between 500-700,000 tonnes in this period. Nigeria in 2014 had an ambitious plan of raising cocoa production output to 1 million tonnes annually from less than 300,000 which had been the peak of the Nigerian export volume, while Nigerian figures differ from FAO figures during the period under review.

3.13 2016-2019

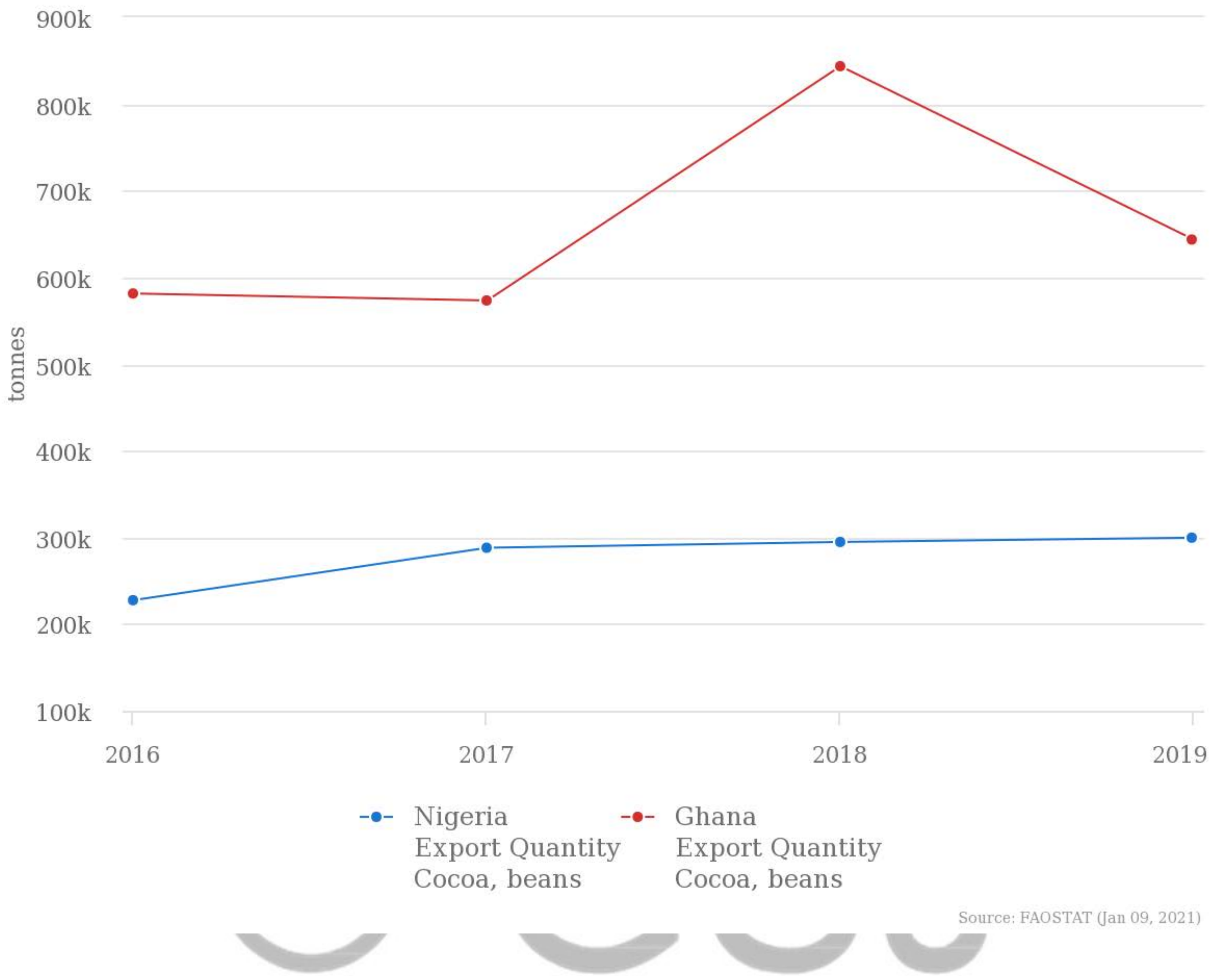

Figure 3.13

Source: www.fao.org/faostat/en/#data/qc Export quantity of Ghana and Nigeria from 2016-2019

Ghanaian cocoa production levels have hovered in a range above 500,000 tonnes, spiking above 800,000 tonnes in 2018. During this period Nigeria returned to a previous production capacity of 300,000 tonnes annually. The data for this period was obtained directly from trading partners of both countries by the FAO.

3.14 Consistency key to Ghana's success

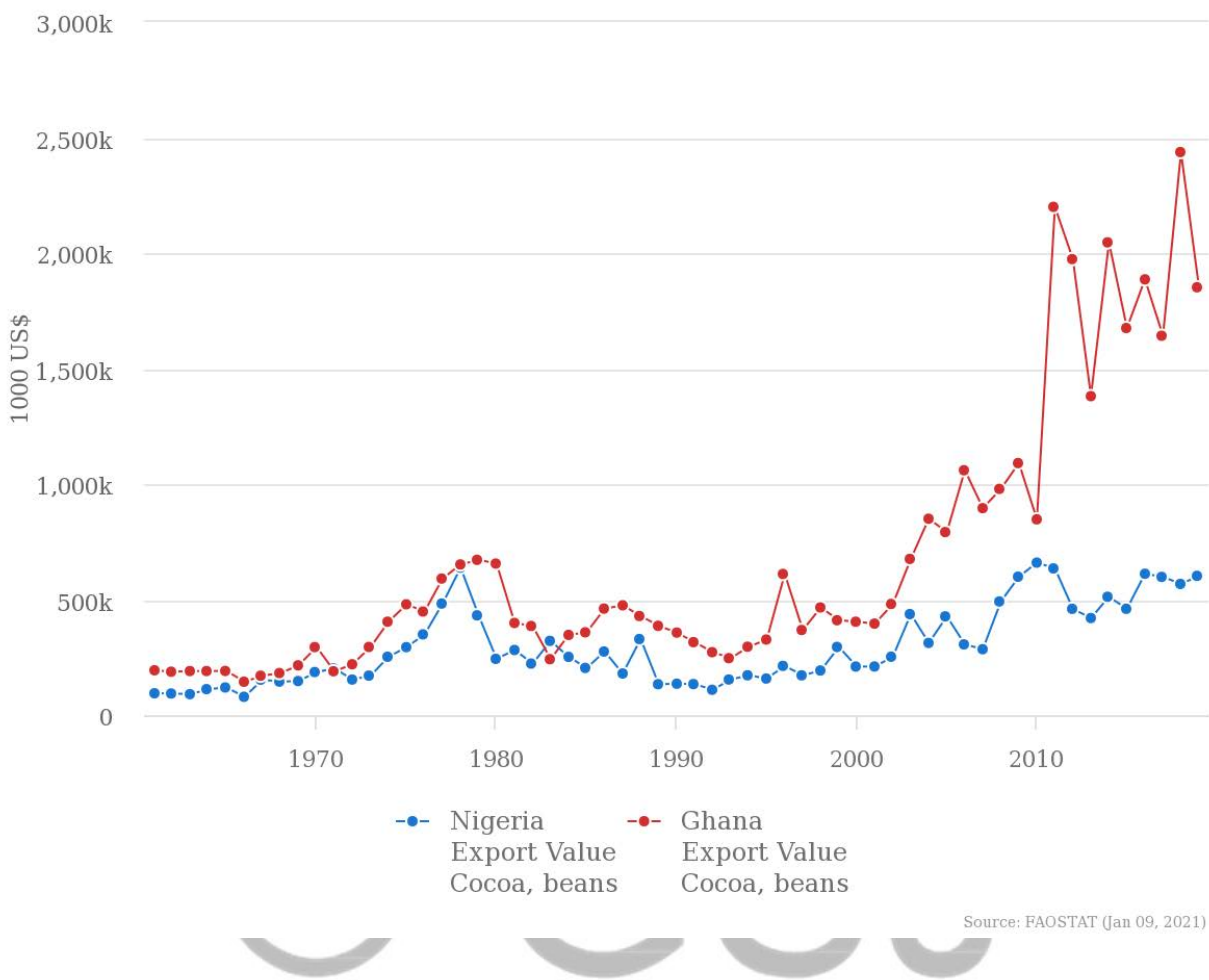

Figure 3.14

Source: www.fao.org/faostat/en/#data/qc Cocoa Beans Export Value of Ghana and Nigeria from 1961-2019

The continuous activity of the Ghanaian COCOBOD was key to Ghana's consistent cocoa production. Cocoa has been a major source of foreign exchange for Ghana compared to Nigeria's reliance on crude oil. Ghana's COCOBOD strictly ensured quality was observed at all levels making Ghanaian cocoa the most desired in the world. Investment in cocoa research was done to sustain high levels of production. Beginner and trainer education programs in the cocoa planting sphere are readily available in Ghana, compared to the lack of comprehensive facilities in Nigeria. Cocoa cultivation is peculiar and it needs government support to create an enabling environment for farmers. Ghana is a good example of a nation where commodity control was exercised, refined to meet the challenges as they came, and the commodity thrived despite ignoring the liberalization advice given by the IMF. Price volatility is a constant in cocoa trading, and the lack of local stabilizing factors adds more uncertainty to its production.

4. Discussion

4.1 Bean to bar production

Only 3 indigenous private chocolate producing companies exist in Nigeria at the time of writing, while the number in Ghana is above 10. When you compare Nigeria's estimated 200 million population to Ghana's 30 million population, the presence of 3 chocolate bar producing companies shows the level of entropy in the Nigerian chocolate industry, and the importance of a stable industry supported by the right policies becomes apparent.

The potential for expansion exists in the local chocolate industry of both nations with the right business model and strategy. Entrepreneurship can not be forced. Stability is key to the entrance of investors and new participants in any sector of business, because the motive is to earn profits. The entrance of new local industries requiring cocoa beans as a raw material for production would increase cocoa cultivation as demand for the product increases locally and internationally.

Table 4.1.1

Chocolate producers in Ghana

Company	Year established
1.Golden Tree-Kingsbite (State-owned)	1965
2. Omanhene Chocolates	1991
3. .DecoKRAFT	2011
4. Niche Chocolate	2011
5. Bon Chocolat Ghana	2014

6. Cocoaline	2014
7. Midunu Chocolates	2014
8. Chocoluv Chocolate	2016
9. 57 Chocolate	2016
10. Moments Chocolate	2017
11. Sekoe chocolate	2017
12. Omama Royal Chocolate	2018

Table 4.1.2

Chocolate producers in Nigeria

Company	Year established
1.Loshes	2016
2. Pod	2017
3. Dune	2019

5. Conclusion

The structures and support systems on ground lend credence to the position occupied by both nations on the current list of African cocoa producers, and it laid the foundation for further success of the crop value chain in Ghana. The sophistication of creating the finished product, and dimensions of job creation, bean to bar processing revenue, export potential and foreign exchange earnings, alongside expanding taxable entities for the government by the value created are significant reasons to delve into further exploration of the cocoa value chain, converting cocoa beans to chocolate bars.

This comparative study showed the benefits of sustained policy interventions by the government in the agricultural sector. Furthermore, showing that cocoa farming was successful in Ghana as a result of continuous refinement of government policy over time to address various challenges, while Nigeria lacked coherent strategy within the same timeframe. It showed that the sustained efforts of stakeholders in cocoa production in Ghana culminated in cottage industries delving into industrial cocoa processing to produce chocolate, while Nigeria lacked the momentum to spur such local industrial activity in a confectionary desired all over the world. Ghana on the other hand, persevered on the path of sustaining agricultural productivity and the results are better when the data of both nations are compared from beans processed for export, to chocolates sold by local businesses.

Acknowledgment

To God be the glory.

Conflict Of Interest

There were no conflicts of interest in doing this research study.

REFERENCES

1. Margareth Santander Muñoz, Jader Rodríguez Cortina, Fabrice Eric Vaillant & Sebastian Escobar Parra (2020) An overview of the physical and biochemical transformation of cocoa seeds to beans and to chocolate: Flavor formation, Critical Reviews in Food Science and Nutrition, 60:10, 1593-1613, DOI: 10.1080/10408398.2019.1581726

2. Hermann A. Jürgen Pohlan, Valentin Diaz Perez, (2010). GROWTH AND PRODUCTION OF CACAO, in Soils, Plant Growth and Crop Production, [Ed. Willy H. Verheye], in

Encyclopedia of Life Support Systems (EOLSS), Developed under the Auspices of the UNESCO, Eolss Publishers, Oxford, UK, [http://www.eolss.net] [Retrieved December 4, 2010].

3. Swiss Platform for Sustainable Cocoa. https://www.kakaoplattform.ch/about-cocoa/cocoa-facts-and-figures.

4. Marius Wessel, P.M. Foluke Quist-Wessel. (2015) Cocoa production in West Africa, a review and analysis of recent developments. NJAS - Wageningen Journal of Life Sciences, Volumes 74–75, Pp1-7. https://doi.org/10.1016/j.njas.2015.09.001.

5. Hamzat, R.A., Olaiya, A.O., Sanusi, R.A., Adedeji, A.R. (2006). State of Cocoa Growing, Quality and Research in Nigeria: Need for Intervention.

6. Owusu-Boateng G, Owusu SK (2015). Methods of cocoa harvesting to drying of bean in Ghana and polycyclic aromatic hydrocarbon concentration in the nib and shell of the cocoa bean. Acad. J. Agric. Res. 3(9): 176-183.

7. Jaeger,William K. 1991. The impact of policy in African agriculture : an empirical investigation (English). Policy, Research, and External Affairs working papers;no. WPS 640. Trade and finance Washington, D.C. : World Bank Group. http://documents.worldbank.org/curated/en/689311468768677973/The-impact-of-policy-in-African-agriculture-an-empirical-investigation

8. Jaeger, William. (1992). The Effects of Economic Policies on African Agriculture. World Bank Discussion Papers. 147.

9. Gayi,Samuel K., Tsowou, Komi. (2015) "Cocoa industry: Integrating small farmers into the global value chain."

10. Tilly, Charles. (1984). Big structures, large processes, huge comparisons. Russell Sage Foundation.

11. Adiyia, Michael. Ashton, William. (2017). "Comparative Research" Rural Development Institute, Brandon University.

12. Pickvance, Chris. (2005). The four varieties of comparative analysis: the case of environmental regulation. Journal of Housing and the Built Environment, 16, 7-28.

13. Kolavalli, Shashi. Vigneri,Marcella.(2011) "Cocoa in Ghana: Shaping the Success of an Economy."

14. Meter, Ken and Goldenberg, Megan. P. (2015). “Critical Analysis of Economic Impact Methodologies. In Exploring Economic and Health Impacts of Local Food Procurement.” Chicago, IL: Illinois Public Health Institute.

15. (1971) Cocoa Research Institute of Ghana, PANS Pest Articles & News Summaries, 17:1, 77-79, DOI: 10.1080/09670877109413259

16 Opeke, L.K. (2003) Increasing Cocoa Production in Nigeria During the Third Millennium In Occasional Publications No. 2. CAN. Pp 24-32

17. McLaughlin & Owusu-Ansah (1994), "The National Liberation Council and the Busia Years, 1966–71"

18. McLaughlin & Owusu-Ansah (1994), "The National Redemption Council Years, 1972–79".

19. Federal Office of Statistics (1972). Annual Abstracts of Statistics. FOS, Lagos, Nigeria, June,1972.

20. CTA. (2002). The loss of marketing boards. Rural Radio Resource Pack 02/5. Wageningen, The Netherlands: CTA.

21. The GuardianNG. (2016). Scrapping of cocoa board Nigeria's greatest undoing. https://guardian.ng/features/scrapping-of-cocoa-board-nigerias-greatest-undoing-aikpokpodion/

22. The Nigerian Cocoa Association.(1999) https://cancocoa.org/