The Impact of Trade Facilitation on Agricultural Products Standard Compliance in Relation to Cameroon’s Export Performance

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Abstract

This is a research on the impact of trade facilitation on agricultural products standard compliance in relation to Cameroon’s export performance. The background and literature review was based on concepts like the Trade facilitation, Standards, Residual levels and agreement like the Trade Facilitation Agreement. Secondary data was used for this study, precisely a time series data. The OLS technique was used in the data analysis and the null hypothesis was rejected implying that Standards compliance has a positive relationship with Cocoa Export. Even though some initiatives in relation to Trade Facilitation have been implemented to raise these export volumes, a significant effort by the government needs to be addressed. Looking at the advantages of Trade Facilitation in the long run, it is worth necessary to neglect the high cost of its initial implementation and strive towards compliance. There were recommendations made in the areas of Trade Facilitation promotion and Standards compliance.

Keywords: Standard compliance; Agriculture; Trade facilitation agreement; SPS and TBT agreement; PAHs

Introduction

Agriculture constitutes a significant portion of the world economies, it also contributes towards eradicating hunger and poverty, boosting intra-continental trade and investments, rapid industrialization, economic diversification, sustainable resource and environmental management, it further helps in creating jobs, human security and shared prosperity. In Cameroon for example, Agriculture accounts for 43% of her GDP, it employs about 70% of the active population and contributes to more than one third of total export earnings (2004 journal fresh produce). Main agricultural products include coffee, cattle meat, cocoa beans, bananas, maize, fresh vegetables and groundnuts. The majority of Cameroonian farmers are small-holders, generally obtaining low yields thus subsistence method of farming plays a dominant role in determining the characteristics of output after harvest.

The trend in Agricultural trade worldwide has been characterized by a shift in food particularly from unprocessed to processed food, diets have been shifted from staple food towards items such as fats, protein and vegetable. There has been an increase share of livestock products in the total share of export of agricultural products. The increase in composition of agricultural products is due to increasing population far more than domestic agricultural production, increase urbanization, increase in the income of individuals which in whole has increased the demand for agricultural goods thus making the sector more competitive and eventually lowering the prices of these goods [1]. One of this reason is because agricultural standards has been a key issue nowadays in determining exports due to its nature and characteristics of these products which includes its perishability, fragility, use of chemicals and fertilizers, seasonality in its production, price instability and fluctuation in its supply. For Trade facilitation to be possible, Agricultural product Standard compliance is therefore indispensable, since agricultural standards has as objectives of protect plant, animal and most of all human health. There is the need for standards compliance to be more scrutinized so as to meet food safety as well as timely delivery of agricultural goods in many developing and less developing nations and thus for trade facilitation [2,3], Cameroon most especially whose agricultural trade sector has been experiencing a fall in export volume due to noncompliance standards set by her trading partners in her agricultural product sector especially the major exports like Banana, cocoa, coffee and Palm oil.

Problem statement

Agriculture being predominant in Cameroon, yet her traditional production and export sectors are almost static, or in decline. In addition, a majority of her traditional products are exported unprocessed, with little or no value added. This results to agricultural practices being small-scaled, with inadequate use of machines, poor understanding of methods of usage of chemicals and fertilizers. Consequently, Cameroon’s domestic agricultural production is clearly suffering from standards as noticed from the persistent ban in some agricultural products, the NCCB identified some of these factors as: low yield, inconsistent production pattern, disease incidence, pest attack and use of simple farm tools. Although there has been the existence of Standardizing organizations like the ANOR (Agence de Regularisation De Produit Agriculture) but unfortunately, standard in Cameroon appears to be embryonic without any regulation, thus its application [4-7]. Without an appropriate body responsible for certifying that products conform to national standards and for granting the right to use the national emblem, certification is almost non-existent. Although there has been the existence of Standardizing organizations like the ANOR but unfortunately, standard in Cameroon appears to be embryonic without any regulation, thus its application. Without an appropriate body responsible for certifying that products conform to the national emblem, certification is almost non-existent.

For the purpose of this research, I will concentrate on Cameroons chief export crops which are cocoa and coffee. In central Africa, Cameroon use to be the leading producer of these crops and the fourth largest exporter in Africa. Both crops face problems nowadays...
which include; Fluctuation in output caused by seasonal fluctuation in production, poor weather, inadequate inputs, and periodic pest infections leading to poor quality outputs. The fall in quality and general production reduced export revenue by a quarter in 2012 to 378 million US dollars, meanwhile output of coffee dropped by more than 50% as noticed in 2013 due to same factors affecting cocoa. In addition, weak international prices have driven most farmers out of the market and this has resulted to Cameroon having a weak performance in terms of Trade Facilitation as seen in the graph below showing the overall performance of Cameroon in Trade Facilitation.

Research questions

This research therefore is aimed at providing possible answers to the following research questions:

I. What are the standard requirements by the EU on Cocoa export?

II. Does Standard compliance to EU Cocoa import requirements have an impact of Cameroon's Export volume of Cocoa?

III. What are the Trade Facilitation Initiatives put in place by Cameroon to comply with the EU standards?

IV. What are the challenges faced by Cameroon to comply with Trade Facilitation Agreement?

V. What are the impact of Trade Facilitation on Agricultural Products Standards?

The purpose of this study is to answer the above research questions. The study will be useful to the Cameroonian government in taking decisions on the appropriate allocation of her resources in the agricultural sector which serves as backbone of the economy, It will create awareness to most farmers and entire population on the main area of focus in Cameroon (Order of priority) includes:

| Country (2014) | LPI Rank | Customs | Infrastructure | International shipments | Logistics competence | Tracking & tracing | Timeliness |
|---------------|----------|---------|----------------|------------------------|---------------------|--------------------|------------|
| Singapore     | 5        | 3       | 2              | 6                      | 8                   | 11                 | 9          |
| Ghana         | 100      | 130     | 70             | 93                     | 121                 | 73                 | 113        |
| Cameroon      | 142      | 156     | 154            | 147                    | 104                 | 111                | 120        |

Source: OECD TF Logistics index 2014.

Table 1: Trade facilitation indicators ranking Cameroon-2014.
Trade facilitation is a continuous process. Once trade facilitation mechanisms are designed and put forward, they require continuous efforts of both the business community and the Government. Therefore, for Cameroon to improve on her trade performance, she is required to invest much in her trade facilitation measures.

Benefits of trade facilitation: Efficient and effective trade facilitation in Agricultural and food products can be of great benefits including improved food security, more export income, increased access to productivity advancements, and nutritionally varied diets. Because many foods are highly perishable, they require efficient trade regimes and border crossings. Food security can be effective when cross-border flows of food cargo are “facilitated” to minimize time spent in trade and thereby reduce physical losses and costs. Moreover, there is enormous potential for growth in regionally produced agriculture and food products in ASEAN to help achieve harmonization objectives for trade in goods [16]. Reasons why Trade Facilitation has become a call for concern are due to: increased trade volumes as a result of progressive trade liberalization, increased exchange of goods and services due to high technologies. Eventually, Trade facilitation results are beneficial to both the business community and the Government: Traders benefit is seen from quicker delivery of goods and reduced cost of transactions while the Government gain in terms of revenue collection from tax, increased economic efficiency, increased security and societal protection. Traders gain through faster delivery of goods and reduced transaction costs (Table 2).

Trade facilitation is a continuous process. Once trade facilitation mechanisms have been designed and launched by Government and business community, they should continue to jointly monitor trade related developments, both locally and internationally, in order to adapt the existing measures and design new ones to fit the changing environment. Trade facilitation appears to be a continuous process so once trade facilitation mechanisms is designed and put forward by the Government and the business community, it requires continuous joint efforts of both in monitoring trade developments, both at home and internationally, so as to adapt the current measures and create new ones to adapt to the changing environment.

What is a standard?

Standard can be defined by ISO as a documented agreement that contains technical requirements to be used with consistency as rules or guidelines to ensure that products, materials, services and processes are fit for their purpose. The Codex Alimentarius of FAO is the organization that develops standards, guidelines and codes of good practice related to food. The purpose is to contribute to the safety, quality and fairness of international food trade [1]. Consumers can therefore trust the safety and quality of the food products they buy and importers can trust that the food they ordered will be in accordance with their specifications. Countries can adopt these standards or some of their partners as part of their national standards. In this way, Codex contributes to standards harmonization. It further recommends International Code of Practice including: general principles of food hygiene in respect of these products.

Table 1: Trade facilitation indicators ranking between Cameroon, Ghana and Singapore-2014.

| Government benefits | Trader benefits |
|---------------------|----------------|
| Increased effectiveness of control methods | Cutting costs |
| Enhanced revenue collection | Reducing delays in delivery of goods |
| More effective and efficient use of resources | Faster Customs clearance |
| Improved trader compliance | Simple commercial framework |
| Accelerated economic development | Enhanced competitiveness |
| Encouragement of foreign investments | ----- |

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The agreement on trade facilitation and its main provisions

The WTO TFA was concluded during the Bali Ministerial Conference in December 2013. The agreement aims at expediting the movement of goods across borders, release and clearance of goods,
The main provisions in the TFA: Agreement contains two key provisions: Provision on facilitating customs and other border procedures; and Provision on special and Differential Treatment (S and DT) flexibilities for Least Developed Countries (LDCs) and developing countries.

Agricultural specific TFA provisions: The main provisions from the Trade Facilitation Agreement aiming at facilitating trade in agricultural products are as follows:

Article 1: Publication: This provision will enable trade activists to acquire and enquire relevant and up to date information on the procedures for trade of agricultural products. Thus predictability and reduce transaction costs that would otherwise occur from delays due to lack of information and facilitate trade.

Article 2: Opportunity to comment, information before entry into force, and consultations: Here, Agriculturalists have an opportunity to comment and consult on information such as proposed laws and regulations before entry into force. Such a measure will be useful in accommodating for the interests and views of stakeholders across the agriculture value chain.

Article 3: Advance rulings: Provide advance ruling in a reasonable, timely manner for applicants meeting the necessary requirements. Under this provision, traders in agricultural products will be able to clear products through customs in a minimum time to avoid delays and losses.

Article 4: Procedures for appeal and review: Under this provision a trader in agricultural products has the right to appeal or review on an administrative decision to an authority that issued the decision. This will promote transparency in the review claims in a manner that satisfies traders.

Article 5: Other measures to enhance partiality, non-discrimination and transparency: Countries are required to issue notification for inspections, testing procedures and detention with respect to feedstuffs covered under the notification for protection of human, animal and plant life or health. Such information is important to traders in agricultural products by saving them time and promoting compliance to requirements.

Article 6: Disciplines on fees and charges imposed on or in connection with importation and exportation and penalties: Traders are provided with relevant information on fees and charges connected with importation and exportation other than import and export duties and other charges. This is useful for predictability, compliance and procedures on agricultural products at the border for traders.

Article 7: Release and clearance of goods: The provision provides for expedited shipments for goods under customs control with the aim of providing a timely release for perishable goods. This measure will save traders in agricultural costs and losses that would otherwise be incurred in lengthy entry procedure.

Article 8: Border agency cooperation: Aligning working hours, procedures and formalities, common facilities and establishment of One Stop Border Post control will provide an efficient and timely service delivery to traders and thus facilitate trade in agriculture products.

Article 9: Movement of goods intended for import under customs control: By allowing movement goods under customs control within a country’s territory to another country, traders in agricultural products will be able to save time that would otherwise be used on complying with regulatory requirements at the border.

Article 10: Formalities connecting with importation, exportation and transit: This provision aims to rapidly release and clear goods with minimum incidence and complexity of import, export, and transit particularly perishable goods, reducing time and cost compliance for traders of agricultural products.

Under the Agreement on Technical Barriers to Trade and the Agreement on the Application of Sanitary and Phytosanitary Measures included in the GATT 1994, countries have the right to implement health protection measures and regulations concerning human, animal, and plant health, as well as accompanying technical requirements, restrictions, and voluntary standards and procedures.

The EU requirements for coffee and cocoa can be divided into: (1) Musts: There are requirements that must be met in order to access the EU market, such as the legal requirements, (2) Common requirements: These are requirements which most of your competitors have already implemented like in the Case of Cameroon her competitor Nigeria already implemented, in other words, these the standards requirements you have to comply with so as to keep up with the market and be competitive, and lastly; (3) Niche market requirements for specific segments (Figure 2).

Food safety: Its hygiene, traceability and control: The key issue of EU food legislation is Food safety. This implies that, Food products throughout the entire supply chain so that the guarantee of food safety must be traceable, and also that appropriate action can be taken in cases when food is tested and found unsafe this limits the risks of contamination [19]. A very important aspect in controlling hazards of food safety is by defining the critical control points (HACCP) and by implementing food principles of food management (Common requirements). Subjecting Agricultural and food products under controls is an important aspect. Therefore Products that are not considered safe for consumption will be refused access to the EU markets.

Control of food imported to the EU

In the case of a repeated non-compliance of a specific product which originates from a particular countries, stricter measures, such as a analytical test report and health certificate, will be required for before import. These Products that have shown repeated non-compliance will then be kept on a list included in the Annex of Regulation (EC)
strengthened its regulation on PAH in cocoa beans. Due to problems with PAH residues found in Cameroon's cocoa, it is subject to increased level of controls. In April 2013, the EU 669/2009. Due to problems with PAH residues found in Cameroon's cocoa, it is subject to increased level of controls. In April 2013, the EU strengthened its regulation on PAH in cocoa beans.

Avoid contamination to ensure food safety

Contaminants: These are substances that may be present in a product as a result of the several stages of growing, packaging, processing, transport and storage. The exceeding limits for several contaminants force to place strict control so as to avoid negative impact on the quality of food and risks to human health. There are different forms of contamination which include:

i. Pesticides: The presence of pesticides is the most common reason for border authorities to reject products. This implies that most farmers from Cameroon has to be aware that products containing pesticides above the allowed level will be withdrawn from the EU market.

ii. Mycotoxic: These are moulds and fungi which consist of another reason why there exits many border rejections. For coffee and cocoa beans, Ochratoxin A (OTA) is set at 5 ug/kg.

iii. Poly-Aromatic Hydrocarbons (PAH) which can result from beans coming into direct contact with smoke as in the case of Cameroon, sometimes caused by artificial and poorly maintained driers, the limit for Benzo (a) Pyrene is 5.0 ug/kg of fat and 30 ug/kg approximately 0.03 mg/kg for the total sum of PAHs. The limit for the PAH was said to become stricter as of 1st April 2015. The total acceptable level of PAH by set by the EU In April 2013 was 0.2 mg/kg. This greatly affected Cameroonos export to the EU.

iv. Samonella, which is a serious form of contamination that occurs occasionally as a result of incorrect harvesting and drying techniques can be eliminated by irradiation but yet not allowed by the EU legislation.

v. Contamination by foreign matter like plastic and insects are a threat when food safety producers are not carefully managed.

Current situation in Cameroon

In the Center South and Eastern regions of Cameroon, the climatic condition favors the sun drying of cocoa. The rainfall in this area is not much. Unlike in the South West Province where the rain fall is very high and heavy, sun drying during the rainy season is farfetched. Hence cocoa drying during the rainy season is by the used of artificial driers. These artificial dryers originally, were not properly designed and maintained [20;21]. Hence fume and smoke are bound to appear on the cocoa beans. Thanks to the European Union that provided 2500 Samoan ovens to the South West Farmers within a period of eight years. At least 20% of the demand was satisfied. Farmers were very glad. About 70% of the farmers still used local materials, which are very poorly designed. This greatly affected the sustainability of the cocoa sector in Cameroon and has resulted to a fall in her export volume in this sector. With the maximum level of PAH 0.2 ug/mg placed by the chief cocoa exporter, The Netherlands, Cameroon’s cocoa production still faces lots of challenges.

Initiatives by Cameroon Government on Trade Facilitation

In the area of trade

- Initiatives for the Elimination of quantitative restrictions on imports, licences and other import and export authorizations; such as the introduction of the single window system (eGUCE) in 2005, allowing a single submission point for trading documents. Therefore, reducing delays in import and export procedures.
- Initiatives on up-dating the legislation on main trade institutions in Cameroon such as the Ministry of Trade, Products standards regulatory body (ARNO), Cameroon’s customs Authority, as sole public-private bodies specialized on trade facilitation.
- Organization of specific training/awareness programs for companies in the field of trade facilitation such as the Cameroon trade Forum created in 2014.
- Introduction of measures designed to guarantee fairness in commercial transactions, in particular through metrology controls, a crackdown on discriminatory sales, refusal to sell, holding of stocks for speculative purposes and conditional sales.
- Implementation of legislation on dumping and competition; such as the signing of the structural adjustment program II in 1994.
- Reorganization of tax and customs regimes to make them more effective and consistent with the sub regional programme adopted within the Central African Economic and Monetary Community (CEMAC).
- Implementation, as of January 2007, of the computerized system of customs administration (ASYCUDA) and the installation of a container scanner at the port of Douala, the main port through which goods enter the country.

Legal initiatives pertaining to trade facilitation

Cameroon has signed agreements on legal basis which enables them, through a mutually beneficial manner, to strengthen and diversify their trade relations in a fairly manner in accordance with the provisions of WTO agreements such as the:

- Government secured adoption of the Investment Charter by the National Assembly. A sectorial machinery for its implementation, in particular the Investment Promotion Agency, the Export Promotion Agency and the National Agency for Standards and Quality have still to be put in place.
- 1994 Marrakech Agreement Establishing the World Trade Organization ratified by Decree No. 95/194 of 26 September 1995. Hence the Government has committed itself to implementing the agreement on goods (GATT), the Agreement on Services (GATS), the Agreement on Intellectual Property (TRIPS).
- EU-ACP Partnership Agreement (2000 Cotonou Agreement), the African Intellectual Property Organization (OAPI), the African Export - Import (AFREXIM Bank), the Organization for the Harmonization of Business Law in Africa (OHADA), United Nations Conventions on International Trade Law (UNCITRAL), the World Trade Organization (WTO), the Islamic Conference Organization (agreement ratified on 11 July 1983), and finally the international agreements on products and the Agreement on Services (GATS), the Agreement on Intellectual Property (TRIPS).

Regarding financial initiatives

The Government has taken measures to strengthen the financial sector such as the Douala Stock Exchange began operations in 2006.

Telecommunications initiatives

A Special Telecommunications Fund has been set up, designed to support investment policy in international trade. This is to enable
the Government to provide effective funding for the universal telecommunications service, and to develop telecommunications in a consistent manner throughout the national territory.

**Transport initiative**

Air Transport Safety and Security Project have been put in place to Liberalize this sector, and to modernize civil aviation and bring it into line with international safety standards. And in the port subsector, measures have been taken to liberalize and simplify procedures at the Port of Douala.

**Effects of trade facilitation on standards**

Considering the fact that SPS measure is a component of standards, it has a direct link to Trade facilitation. For example, when Codex Alimentarius, the International Plant Protection Convention and the Office International Des Epizooties OIE), introducing the quality and safety management system and conducting equivalence assessments, such as the Hazard Analysis and Critical Control Point (HACCP), this will obviously facilitate access to international markets [17]. Therefore, to benefit from the Trade Facilitation Agreement developing countries and LDCs has to comply with standards.

TFA enables reduction in compliance costs of implementation of these standard measures. Some of these costs are unnecessary measures, documentations, inefficient and complicated procedures, long time taken for inspections, little or no transparency, consistency and predictability in the implementation of SPS and TBT controls. These costs are sometimes direct (for example; document submission, fees and charges, cost of inspection) or indirect (e.g. delays at border, uncertainty about requirements and procedures, sometimes inadequate and contradictory documentation). Costs from export and import-related documentation and procedures vary from 1% to 15% estimates of cost of production of a product. These make an agricultural product's cost very high. Considering the fact that agricultural products constitute most exports of developing countries especially Cameroon and other LDCs, combined with poor bureaucracy and infrastructure, faced with these challenges increase her transaction costs and delays to clear exports, imports, and goods on transit. In most African countries, loss of revenue resulting from inefficient and complicated border procedures can be estimated at exceeding 5% of their GDP. Therefore, Trade facilitation stands as a possible means to augment revenues from trade and assist developing countries to partake in international trade. According to the OECD reports, simplification and harmonization of documents results in the reduction of trade costs by 3% for low-income countries and 2.7% for lower middle-income countries; streamlining procedures as one of the objectives of Trade Facilitation would reduce cost by 2.2% for lower middle-income countries and by 2.3% for low-income countries. When trade related information are available, such as the SPS standards, this would go a long way in generating cost savings of 1.6 percent for low-income countries 1.4% for lower middle-income countries [7].

In addition, implementing the TFA will help minimize some hidden form of protectionism that relates to SPS measures which some LDCs and developing countries face. Complying with the Agreement on SPS is related with border administration, such as rapid alert mechanisms, import alerts and, fees and charges, transparency of procedures, etc. All these elements are relevant for facilitation of trade, some of these elements may become SPS barriers. Eventually, the TFA helps to decrease SPS barriers by adopting e-documents, simplifying and reducing the required documents, cutting down multiple procedures, formalities and inspections, enabling cooperation between producers in the supply chain and SPS authorities, expediting clearance of goods including goods on transit.

Finally, The TFA Agreement provides provisions of S&K which enables developing countries and LDCs to implement the agreement on Trade Facilitation in a manner with conformity to their available, and where needed, they are liable to and Capacity Building and Technical Assistance (TACB). Although, in contrary to what LDCs and developing countries expected, this agreement did not include some important SPS provisions with guaranteed technical assistance. However, The TFA links the extent and the timing of implementation upon entry into force by LDCs and developing countries, providing to them more freedom to determine between the various categories A, B, and C, and making notifications to the committee in case of difficulties in implementing Categories B and C.

**Literature Review**

Trade facilitation is therefore now at the forefront of recent trade policy dialogue as developing countries look for ways to boost their economic growth through increased trade performance. This includes the transparency of trade policy and regulation, as well as product standards, infrastructure to support trade, and technology as it applies to lowering trade costs. Trade facilitation therefore include the improvement of transport infrastructure, the removal of government corruption, the modernization of customs administration, the removal of other non-tariff trade barriers, export marketing and promotion as well as improving the wider environment in which trade transactions take place. Lowering trade-related transaction costs is expected to result in significant improvement in Cameroon's ability to compete effectively in the global economy [6,9]. Further range of benefits to be realized include: improved revenue collection, improved border controls and security, lower administrative costs, encouragement of more trade and investment, and enhancement of the competitiveness of the domestic business in the home market as well as in the export market.

Economic benefits of standards from the Cameroon-Chococam, Compliance to standards will help producers to produce more efficiently and become competitive in the market. Standards can contribute XAF 9,991,750,000 representing over 5% of the Cocoa Company's annual turnover in the previous years.

The literature reporting empirical results for trade facilitation measures and agricultural trade was reviewed in order to advise future work on trade facilitation processes focused on more agriculture-specific constraints. While this exercise aims to identify evaluations using proxies of trade facilitation, it does not discuss measures such as governance and access to finance which fall outside of the scope of this paper but have been identified in the literature as potentially strong impediments to trade in agricultural products. Indeed, surveys conducted under the aid-for-trade initiative report that more than half of respondents from developing country agro-food suppliers listed access to finance as the main obstacle to their participation in value chains. Similarly, Moisė et al. [7] point to issues of governance, and limited market information and access to financial services as significant bottlenecks to agricultural trade in developing countries. His study focusses predominantly on time delays, logistics and infrastructure, and customs efficiency or sanitary and phytosanitary (SPS) standards and technical barriers to trade (TBT), with very few studies overlapping into both categories.

Overall, evaluations which take indicators of trade times, logistics performance and infrastructure quality tend to find a significant relationship between trade facilitation proxies and trade flows or trade
costs, though results vary significantly across product sectors and regions. These suggest that the length of export and import times and customs clearance delays can present important impediments to trade for time-sensitive agricultural products. Logistics performance and maritime connectivity also appear to have significant effects on trade costs. Nearly all of these studies rely on more general indicators such as the number of days needed to export or connectivity indices which may be more representative of aggregate trade flows and stylized shipments than sector specific constraints. This suggests that data on agriculture-specific measures may be limited [7].

Whether or not these barriers have different implications for agricultural products than those captured by the standard indicators for overall trade is worth investigating. Most empirical studies which attempt to evaluate the effects of customs performance on trade rely on broad measures such as customs times or the number of documents needed to trade as proxies for the customs environment, reporting somewhat limited results. This suggests a gap in available cross-country measures of customs efficiency pertaining not just to agricultural goods but to all trade flows. Here, initiatives to develop measures of customs and border efficiency, such as the OECD Trade Facilitation Indicators or ongoing efforts by the World Customs Organization could present promising avenues to evaluate more targeted at-the-border trade facilitation measures [11,18].

Studies evaluating the impacts of sanitary and phytosanitary standards and technical barriers to trade tend to report a negative effect on agricultural exports from developing countries to high income countries, but little effect on trade between developed countries, though again significant variations are observed across sectors. These studies also tend to highlight the importance of compliance capacity in determining whether standards form impeding barriers to trade.

While numerous studies evaluate the impacts of SPS and TBT measures on agricultural trade flows, relatively few have assessed the impacts of standards harmonization and compliance capacities largely because of data issues for quantitative assessments. The reviewed evaluations of standard harmonization are limited to either country specific, intra-EU or intra-OECD trade.

Analyzing harmonization measures in other regional groupings or the adoption of international standards across a wider sample of countries could provide valuable insight on the impacts of harmonizing standards on agricultural trade, though limited information on national standards may be an issue. Expanding measures of institutional compliance capacity and infrastructure such as Relative Rejection Rate Indicator, which summarizes compliance performance and at the border rejections of countries, and the Standards Compliance Capacity Index [18], which aims to provide a systemic and consistent framework to evaluate standards compliance capacity, could also present valuable openings to further assess the impact of compliance capacity and national compliance infrastructure.

Although gravity model type estimations such as the ones covered in this review do not directly identify the source of trade friction or trade costs at the country or country-pair level they can, as Noulas et al. [12] suggest, form part of a comprehensive diagnosis and help advise policy packages, particularly when combined with country level assessments of trade facilitation, logistics and trade policy. Noulas et al. [12] suggest that trade facilitation policy should pay special attention to improving transport and logistics performance, particularly in low income countries and in Sub-Saharan Africa where these could have highly significant impacts on trade costs. Improvements in such "hard" infrastructure have a greater impact on export growth compared to "soft" infrastructure, but they are expensive.

Similarly, Mosé et al. [7] propose that a significant expansion of agricultural trade in low income countries could be achieved by easing constraints related to infrastructure quality and efficiently upgrading standards implementation, monitoring and certification capacities. The OECD and the WTO further identified the removal of obstacles to trade, the reduction of customs delays and border procedures, and the reduction of transport costs as key priorities for future aid-for-trade initiatives in the agro-food sector. Echoing these policy recommendations, the agricultural trade facilitation plan for the Greater Mekong Sub region outlined by the Asian Development Bank sets out short-term development strategies to develop and enhance the capacities of the region's quarantine agencies in improving permit insurance systems, product certification and inspection procedures through cooperation and information exchange. The plan further set out to examine and review regulatory frameworks and assess the adequacy of agricultural bureaucracies, in addition to a long-term strategy of liberalizing trade and improving cooperation among customs, border agencies and the private sector. Building upon research and policy lessons from past empirical studies, future quantitative and qualitative evaluations of trade facilitation focused on more agriculture-specific constraints could provide valuable insights on agricultural trade constraints and help advice more targeted policy initiatives. Trade patterns are evolving with traded intermediate inputs increasing in importance as firms increasingly engage in global value chains and consumers demand more food variety including year-round supplies of seasonal products. Consequently, trade facilitation measures that efficiently and speedily enable goods to cross borders while assuring food safety become paramount.

Based on OECD’s work on the relationship between trade facilitation indicators and agricultural trade, the initial purpose of this study was to compliment that information by collecting data on the various procedures, timeliness and cost required for agricultural goods to cross a border either to enter as imports or to leave as exports. Among the variables identified in the literature and are of interest for this study, number of documents, time and cost, come from the World Bank's Doing Business database. But, those metrics are mostly based on trading manufactured goods that do not reflect the peculiarities of agricultural trade. There is a need therefore to collect such metrics specifically for agricultural products, especially perishable goods as they require special handling, they need to pass SPS and other health and safety standards and they require clearance not only from customs but also health authorities. Information on how long it takes to get agricultural goods to the border (inland transport), because of the widely dispersed farms and in developing countries the relatively small scale of production from small holders implies greater time and possibly cost than merchandise goods that are produced in a few plants that are probably located near major cities and transport hubs. There may be additional time required to clear customs because inspections may occur more than once for the same consignment by customs and by health authorities, if the various agencies do not co-ordinate. In addition to special logistics to assure continued cold storage as goods transit to or depart the border, information on whether cold storage is available and the procedures for getting goods in and out of those facilities and where they are located (within or outside the clearance area) could affect time and cost.

The number of documents required may also be different for many agricultural products and all of these may necessitate longer time.
Timeliness has been identified in the literature as important to trade. Time in motion information as agricultural, especially perishable products move through the border would help identify bottlenecks and suggest procedures to speed the process without impeding countries abilities to provide the necessary food safety for their consumers or to protect their plants and animals from pests and other risks. Improvements in procedures that can speed up the process would facilitate trade. In general, to ascertain whether trade of agricultural goods, because of their particularities, is different from trade in general merchandise, needs agricultural specific metrics.

The original intent was to contact relevant agencies in OECD Member and developing countries to collect such information. The International Finance Corporation of the World Bank is in the process of collecting such information in its “Benchmarking the Business of Agriculture” project, an undertaking comparable to its “Doing Business” endeavor. A pilot to test the project in ten countries was initiated in 2014 with plans to eventually cover some 80 countries. Among other information, this project will provide time and motion indicators for the procedures and costs associated with the process of complying with food safety and health standards, along with describing the process for cross-border trade for specific agricultural produce. The aim is to provide policy makers with laws and regulations affecting the business of agriculture that are comparable across countries. Once these data become available, one would be able to revisit the question of whether and to what extent, trade facilitation of agricultural; particularly perishable products, differs from other goods and how they influence agricultural trade. This approach looks more promising than the one whereby OECD would directly collect questionnaire based information, given the difficulty of establishing the necessary contacts, especially in a number of developing countries. For this study, the next section describes developments in a few trade facilitating indicators from the Trading Across Borders component of the Doing Business database and follows with a description of developments in agricultural trade since the beginning of the 21st century especially for low and lower middle income countries. An innovative approach by Hummels and his co-authors to estimate the premium firms and consumers are willing to pay for timely delivery of goods is also discussed. SPS impact on LDCs agricultural exports sector the strict SPS standards requirements by developed countries, its implication to developing countries coupled with the lack of economic and technical resources of in standard setting process, has limited their market access to most developed countries. Many these developing countries have, as result, negative effects on their economies as a result of their failure to comply with these SPS standards requirements. This has resulted in a considerable loss of revenue from export, income and employment.

Research Methodology

John Beghin [14] defines Research design as a term that covers the aims of the research, research philosophy, the final selection of appropriate methodology, data collection techniques, the chosen method of data analysis and interpretation and an elaboration on how this combination blend into literature. A research design is a plan that is employed to answer the research problem. Therefore, a research design is a plan that is adopted to answer questions in the most accurate, valid and objective way.

The research project was conducted basing on the guidelines advocated by Niang [4], that is, a case study method will involve at least two stages of work via:

- Gathering more specific data: the researcher achieved this through reading relevant journals and press publications.
- Presenting an analysis of findings and recommendations for action: in this study it was achieved through the feedback provided on interim and final bases to the case study organization, as well as the production of the final research report.

Since Cameroon has made no notifications on standard with the absence of proper standardisation organisation on Agricultural product sector precisely Cocoa sector which is my point of interest, the research was based on analysing the available data on the trend of Cocoa to bring out reasons for the fall in her export and recommend possible solutions.

Limitations

This research study has been out to show the impact of standard compliance but lacked data on Cameroon’s Cocoa compliance. In addition, due to time constraint to contact directly farmers and get the realities of what they face with regards to compliance. I propose a further research on this topic for better results.

Results and Findings

Graphical techniques are more advantageous in that they convey and display findings clearly and in an easy-to-understand format. Buys et al. [6] stated that there is much truth in the adage: a picture is worth a thousand words. The next chapter will focus on data analysis and findings of the research study. The Gravity based Approach is used to quantify standards impacts on trade. It was also stated that the model is the most successful framework for empirical analysis of trade flow between countries (Table 3).

Model specification

In ExpCcij = µ + γ InGDPi + θ InGDPj + δ InPopi + α PAH + εij

Our dependent variables are Cocoa export which illustrates the outflow of the volume of trade from Cameroon to her major Cocoa importer, the Netherlands. The independent variables shall be explained in Table 4.

There is the use of a time series data for this research ranging from 2004 to 2014, the null and the alternative hypothesis of the F-test are as follows:

H₀: There exist no relationship between standards compliance and Export volume.

H₁: There is a significant relationship between standards compliance and Export volume.

The OLS regression method was used to analyse the data and the following results were obtained (Figure 3).

This is a time series since we study data in a long run trend and Co-integration can be used to improve long-run forecast accuracy for policy making. We are going to use the OLS technique to minimize the effect of errors arising from omission of important variables in the data so εij will capture the differences observed and value that would have been obtained if the relationship between dependent and independent variable was deterministic.

ExpCc = 186770.2 + 1.86GDPi - 1.96GDPj + 0.56PoPi - 36.30Popj + 1.36PAH + εij

The coefficient of the GDPi (Cameroon’s GDP is positive (1.86), implying, everything being equal, a unit increase in GDP will increase the amount of Cocoa Export volume by 1.86 unit. There is strong
relationship between Cameroon's GDP and CoCoa Export and is positive but insignificant since the P-value < 0.1 that is (0.149). This can be explained by the fact that most Cocoa farmers in Cameroon practice small scaled farming. An increase in a farmers GDP will provide resources for the purchase of farm inputs like fertilizers and seeds which thus increase her output and eventually increase the volume of exports.

The GDPj (Netherlands GDP) coefficient is negative (-1.96) implying a unit increase in Netherland's GDP will reduce the amount of exports by -1.96 unit, considering all other factors constant. There is a negative relationship between export and GDP and it is insignificant since the P-value < 0.1 (0.024). This value is valid at 95% significant level. The increase in Netherlands GDP can lead to the farmers look for other measures of raw material (Cocoa) to substitute import from Cameroon.

In Addition, the PoPj is at -36.30 which shows a negative relationship with the cocoa export implying that, an increase population will lead too increase in food security. Increase in food security will make the EU to place a more stringent requirement for exports from Cameroon. This will then affect Cameroon's export negatively since compliance is not automatic. Increase in population can also lead to increase in the labour for in Netherland since population affects white-collar jobs, most people without jobs will seek for other means of survival by supplying labour to farms and other unskilled labour jobs.

The coefficient of the PoPi (Cameroon's Population is positive (0.56), implying, everything being equal, a unit increase in Population will increase the amount of Cocoa Export volume by 0.56 unit. There is positive relationship between Cameroon's Population increase and Cocoa Export. This can be explained by the fact that increase in population will increase the labour supply for the cocoa farmers coupled with the fact that cocoa farming is labour intensive.

The coefficient of PAH (Polycyclic Aromatic Hydrocarbon) is 1.36, implying, everything being equal, a unit increase in Compliance to the Maximum Residual level of PAH required by the Netherland (EU) for the import of Cocoa will increase the amount of Cocoa Export volume of Cameroon by 1.36 unit. There is strong relationship between Cameroon's PAH and Cocoa Export and is positive but insignificant since the P-value < 0.1 that is (0.24).

![Table 3: Data presentation and analysis plan.](image)

![Table 4: Variables used in the model.](image)

![Figure 3: Statistical observations made through OLS regression method (3a and 3b).](image)
Conventionally, Cocoa Export and standard compliance are positively related, this makes us reject the null hypothesis $H_0$ which states there is no relationship between standard compliance and Export volume.

The value of $R^2$ is 0.97, implying 97% of Cocoa export is influenced by variables included in our model, it implies the results has a strong relationship between the dependent and independent variable since $R^2$ is close to one. Adjusted $R$-squared is 0.95, also close to one implying many factors affecting the dependent variable (Export) has been included in the regression analysis this makes the result.

From the above remarks, Cameroon is gradually becoming a marginal producer of low quality cocoa and coffee as compared to her rival in the export of these products, Nigeria who is recently taking her place in the EU market. In whole, the major problems that led to the fall in these export are the ageing cocoa and coffee farms which affects the yield per hectare, poor techniques of drying which negatively affects the bean quality (most of the cocoa and coffee bean seeds are dried in ovens which gets contaminated by smoke). In some areas, farmer's dry beans on tarmac roads which end up being contaminated with Polycyclic Aromatic Hydrocarbon (PAH) not good for human consumption. Due to PAH in 2012, the EU rejected a shipment of 2000 MT of coffee beans and hence in April 2013, they re-enforced strict measures on PAH contamination. To this effect, by December 2013, it resulted in a rejection of 3000MT of beans due to non-compliance to the EU requirements. This low beans quality and its rejection pulled the place in the EU market. In whole, the major problems that led to her place in the EU market. In whole, the major problems that led to the fall in these export are the ageing cocoa and coffee farms which affects the yield per hectare, poor techniques of drying which negatively affects the bean quality (most of the cocoa and coffee bean seeds are dried in ovens which gets contaminated by smoke). In some areas, farmer's dry beans on tarmac roads which end up being contaminated with Polycyclic Aromatic Hydrocarbon (PAH) not good for human consumption. Due to PAH in 2012, the EU rejected a shipment of 2000 MT of coffee beans and hence in April 2013, they re-enforced strict measures on PAH contamination. To this effect, by December 2013, it resulted in a rejection of 3000MT of beans due to non-compliance to the EU requirements. This low beans quality and its rejection pulled the need for the establishment, operationalization and promotion of SPS enquiry points or nodes at community levels.

Summary and Conclusion

These trade facilitation Initiatives investments, if adopted and implemented will benefits directly and indirectly to both Governments and business community: Governments benefit in terms of revenue collection, increased economic efficiency, better security and protection of society. Traders gain through faster delivery of goods and reduced transaction costs. These gains are considerable, especially for small companies, for whom the costs of compliance with procedures are considerable higher: in this case, trade facilitation enhances the capacity of SMEs to participate in international trade.

There is therefore the need to comply with standards which can be done depending on circumstances, various steps may be taken in pursuit of compliance. They may include the following:

A. Legal and regulatory change
B. Reform of institutional structures and responsibilities
C. Restructuring supply chains and increasing control over primary production
D. Modifications in production, post- harvest, processing, and treatment technologies
E. Modifications in firm - and farm - level quality assurance and safety management systems
F. Strengthening of information and surveillance systems
G. Technical and scientific research
H. Investments in physical infrastructure
I. Strengthening of accreditation and certification systems.

Some proposed Strategic policy recommendations in order to enhance Africa's participation in standards setting include:

a. The government should develop, strengthen or support regional policies that will encourage linkage with universities and national research institutions. This effort should be in collaboration with National Agricultural Research Systems (NARS) to enable the empowerment of regulatory institutions to commission standards setting projects and researches.

b. SPS standards-setting committees are encouraged to be established to represent the national and regional positions at international standards setting fora.

c. Governments at all levels should allocate funds to the accreditation of SPS laboratories; create incentives for private sector participation in funding initiatives; promote public-private partnerships including global partnerships in strengthening the capacities of laboratories; strengthening existing laboratories and identify centers of excellence for supporting accreditation activities.

d. Strengthen capacities for risk analysis as a core component of the strategies for implementation of CAADP country and regional compacts implementation processes.

e. Government should allocate resources to the provision of creating awareness tools among stakeholders. Such tools include policy briefs, media, radio, leaflets, posters, et cetera. Along this recommendation is the need for the establishment, operationalization and promotion of SPS enquiry points or nodes at community levels.

f. Capacity building: Training of Trainers (TOT) on various fields relevant to trade and food safety, Building capacity (human resources and equipment) for an effective quality and safety assurance for an effective quality and safety assurance systems, negotiations skills, improvement of infrastructure, especially the cold Improvement of infrastructure, establishment of testing and referral laboratories, Building of good and credible scientific database through regular sampling and analysis of samples, through regular sampling and analysis of samples, to counter any false claims. Development of bankable project proposals to help in accessing financial resources accessing financial resources. Participation in standard setting committees.

g. Financial resources: Establish a sustainable funding mechanism, Mobilization of funds from governments and Mobilization of funds from governments and development partners.

h. Policies: Development of sound policies and strategies for food safety and quality. Development of an effective and relevant legal framework to facilitate good hygiene practices. Hygiene practices.

i. Coordination and harmonization of important requirements: Given the complexity of SPS issues and other given the complexity of SPS issues and other requirements by importing countries.

Proposals on trade related investment areas to the government of Cameroon based on the initiatives carried forward by the government

To gear on the challenges of that facing Trade facilitation, Cameroon requires a comprehensive structure and coordinated approach that should necessitate in removing all the barriers that results in reducing trading costs and improve the business environment with efficient regulation. A lot has been done especially in the port of Douala,
however the endless process is to increase the chain supply and Logistic management, for enhancing trade facilitation it is proposed necessary to impinge the following ones:

**Investment in a single window project to enable speeding up customs and border crossing procedure:** The issue of speed up customs and border crossing procedure involves a significant reduction of number of documents. UNECA, 2014 fulfilled that, in order to succeed on this the Customs and Border Protection (CBP) tools should be organized into modernized procedures by switching from paper forms to electronic forms in deed this will decrease the time for both goods to be exported and imported. The trade document should be harmonized in accordance to international standardized manner, the clear transparency procedure and customs administration are required to a significant level of qualification and reliability.

**Promoting the use of new technology that match slightly with efforts:** Various customs administrations in Africa are using the Automated System Customs Data called ASYCUDA++ that helps in Trade Facilitation by strengthening the Custom administration through implementation of modern and reliable system (UNCTAD, 2013). The Cameroon government should invest in implementation of this new technology and capacity building for workers to be able to work on this new software.

**Removing the illegal roadblocks and preventing the diversion of goods on countries roads:** Trade costs are generally low for the country with very good condition business climate; illegal roadblocks and diversion are serious problem in developing countries as they are influenced by the higher trade cost and lower customs and border procedures. There is no uncertainty that, the removal of roadblocks and diversion of goods in Africa (SS) is said to be of most important accomplishment. Roadblocks in Africa are mostly caused by poor state of infrastructure and services, out of the road network in Africa only 580,066 or 22.7% of roads are paved and the remaining part being made of either earth or gravel.

**Investment in adequate and efficiency transport infrastructure and services:** The effort needed here is just and re habilitating and construction of existing road, expanding road network to isolated areas. Increasing connectivity of railway section of various track gauges, quality of the road has a significant impact to the time and cost of trade across borders.

**Facilitation of efficient and transparent flow of goods:** Tracking the goods from the source to destination, In Belgium there is more than 250 accessible networks from Air freight, sea freight and Land transportation for cargo to enter Belgium. The tracking of the cargo becomes easy for a sender even if a receiver can trace through using the track number if this is done in Cameroon, it will go a long way to facilitate trade.

**Integration of border management system:** Border efficient management system should have a significant impact towards a trade facilitation as the efficiency of the system need to work under the certified legal regulatory principles and transparent so as to make the system to work in a remarkable manner. One Stop Border Posts is very helpful to this policy strategy as it reduces time and cost of trading because it harmonization of the customs and border procedures. The responsibility of protecting the interest should be coordinated by the several state agencies includes policies, security, customs, and immigration, Health and Sanitation and the Bureau for Standards.

The use of public–private partnerships on custom-border reforms: The approach of involving the private sector is said to be of imperatives and continue to be a growth grounded in trade facilitation. To be effective in Trade facilitation, government's responses to private sectors needs should be driven by sustained Public–private consultation. Various studies observed that private sector traders share their view with government by many means.

However, due to Trade Facilitation Agreement, the expected impact of standards on agricultural trade is not necessarily clear. The one hand compliance with standards may lead to increased production costs which reduces trade, while on the other, standards may also increase information on food safety and product quality which can lead to increased consumer confidence, reduce transaction costs and thus facilitate trade. TFA will ensure the Streamlining of export processing procedures in the agriculture and agro-processing sectors to improve access to markets. Nevertheless, with the aim to increase the competitiveness of the agricultural sector by building export capacity, reducing trade transaction costs and deepening regional integration, government officials need to adhere to Trade Facilitation Agreement. If Cameroonian agricultural producers can comply with these wide range of requirements, including technical regulations, product standards and customs procedures. Then the agricultural sector will be a highly beneficial sector to trade and resources will be allocated efficiently. Trade facilitation and their indicators are very important in enhancing trade in both developed and developing countries.

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