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Tariff Escalation and Import Bans in the Economic Partnership Agreement between the EU and West Africa

Omid Zamani, Craig Chibanda, Janine Pelikan

Thünen Institute of Market Analysis, Bundesallee 63, 38116 Braunschweig, Germany

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Introduction

In the context of globalization, there are considerable potentials for developing countries to get integrated in the global market. To establish an enduring duty-free-quota-free trade area through the gradual removal of trade barriers, West African states and the EU have been negotiating the Economic Partnership Agreement (EPA). The two partners of agreement include the West African States, comprising those countries in the Economic Community of West African States (ECOWAS) and the West African Economic and Monetary Union (UEMOA) plus Mauritania (16 states in total), of the one part, and the EU-28, of the other part. According to the ECOWAS agreement, the imports from outside of ECOWAS are subject to the Common External Tariff (CET) while the trade between members is duty-free. However, the EU-EPA agreement allows the West African Countries to access the EU market immediately while they are supposed to gradually liberalize 75 percent of tariff lines for the EU's products in a 20-years transmission period. The dismantling process to liberalize import tariffs is designed in 5 product groups with different base duties identified as ECOWAS CET. One group known as sensitive products is excluded from liberalization. Thus, the final applied tariff rate depends on the ECOWAS CET as well as the dismantling process proposed by EPA. To achieve a certain objective, these two policy strategies should be in the same line. In this sense, an important implication is related to the tariffs of processed products and raw material along the value chain. Increasing applied tariff with the stage of processing is known as tariff escalation in the policy literature (Hwang et al. 2017). Since the agricultural value chains encompass products with different levels of processing, many empirical studies have focused on the potential effects of tariff escalation in this sector (see e.g. Rae and Josling 2003; Bouët et al. 2014; Narayanan and Khorana 2014;

Boysen et al. 2019). Aggregated applied tariffs for Senegal and Ghana in Figure 2 shows that the EU-EPA may lead to a different pattern in tariff escalation. So far, several works have looked into different potential consequences of the EU-EPA for both agreement partners (e.g. Alaba 2006; Curran et al. 2008; Krapohl et al. 2020). With this study, we contribute to the existing literature by elaborating on the tariff escalation in the EU-EPA and investigating its potential effects on the agricultural value chain.

Besides, in November 2020 the Ministry of Food and Agriculture in Ghana imposed an import ban on poultry product imports from the Netherlands, Germany, Russia, Denmark, and the United Kingdom. This ban follows the outbreak of Avian Influenza subtype H5N8 in Europe and is imposed on one of the most important trade flows between Ghana and the EU. Moreover, in combination with the implementation of the EPA tariff reductions, it will affect relative prices of food in Ghana and thus will influence consumption and production patterns. In our analysis, the differences to the structures in Senegal are also pointed out. This country has already had an import ban with the same justification since 2005. Thus, in the proposed paper we conduct an impact analysis on the EU-EPA trade agreement and the recent import ban.

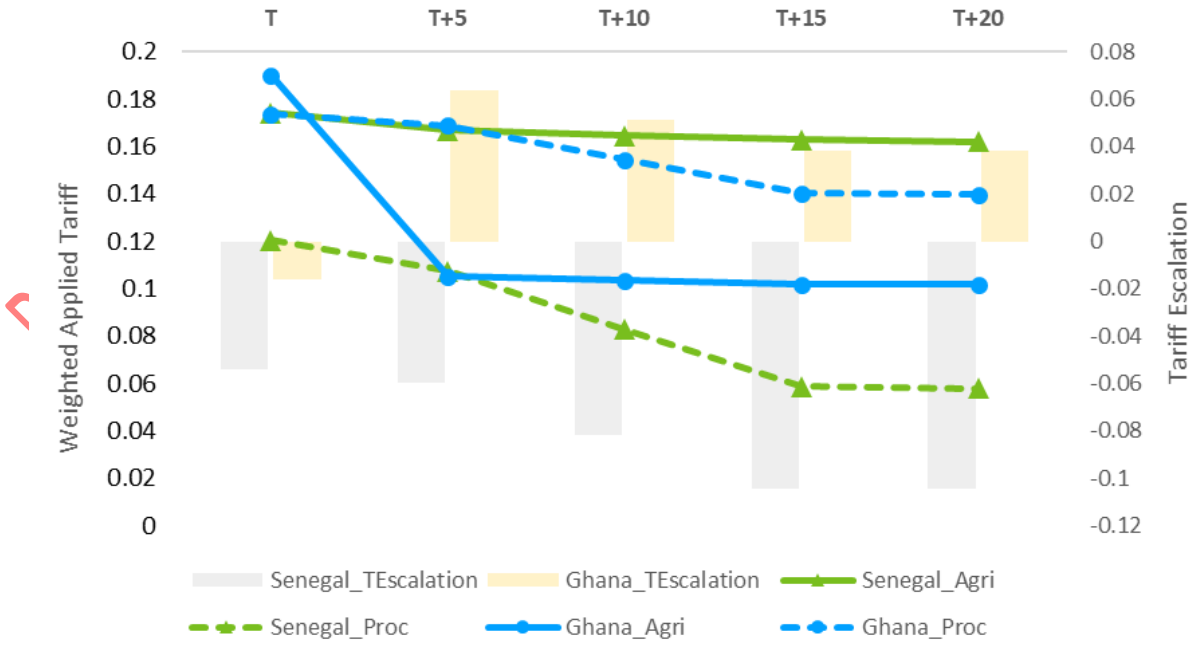


Figure 1. Tariff escalation along agricultural value chains in Ghana and Senegal

Note: the graph is designed based on the EU-EPA dismantling procedure in 20-year transition period. The light-colored bars show the gap between agricultural products vs processed foods applied tariff rates, i.e. tariff escalation. Source: Own elaboration. The data is aggregated by using Tariff Aggregation and Simulation Tool for Economists (TASTE) (developed by Horridge and Laborde 2008).

We design our scenarios based on the detailed trade and tariff data for different sectors of case studies using TASTE (developed by Horridge and Laborde 2008). Then, the GTAP-based MAGNET-Model is applied and a baseline over the next 10 years is run in order to simulate policy scenarios. The baseline includes EU agricultural and trade policies and their implementation (e.g., trade agreements between the EU and Canada or Japan will be considered).

Our results illustrate how the current trade policies influence trade flows, production patterns, domestic consumption and the GDP of countries in West Africa. Thereby, we combine our findings from the analysis of tariff escalation with the CGE-analysis. While recent studies show a declining trend in importance of tariff escalation as a measure to protect industries in importing OECD-countries (Radetzki und Wårell 2020), our analysis addresses this argument in the context of non-OECD-countries. Our findings might give more insides of formulating or revising EPAs by focusing on tariff differentials along the value chain. On the empirical level the effects of the recent import ban in Ghana are addressed for the first time.

Our paper is organized as follow; the second section presents an an overview of the existing literature on differentiated tariff and ban policies. Section 3 provides the method and scenarios, then the results are presented and finally section 6 draws some conclusion and policy recommendations.

2 Literature review: Tariff escalation and agri-food trade bans

Agricultural protection and market access strategies remain controversial topics in international trade negotiations and agreements. Using empirical literature, this section attempts to elaborate on the potential effects of two protection policies namely tariff policies in the value chain and trade bans on the agri-food sector. As laid out above, increasing applied tariff with the stage of processing is known as tariff escalation in the policy literature (Hwang et al. 2017). Since the agricultural value

chains encompass products with different levels of processing, many empirical studies have focused on the potential effects of tariff escalation in this sector (see e.g. Rae and Josling 2003; Bouët et al. 2014; Narayanan and Khorana 2014; Boysen et al. 2019). For example, in Corden's (1966) discussion of effective protection, it is indeed true that reducing tariffs at the upstream stage will increase effective protection.

As Corden (1966), decreasing import tax at the upstream stage of the processing chain, i.e. tariff escalation, can improve effective protection. This policy setting has been systematically practiced in the agri-food value chains of both developed and developing countries (Regmi et al. 2005; Boysen et al. 2019). For instance, the EU applies a 21.6% import duty for milled rice (HS code 100630), which is higher than the tariff rate of paddy rice (HS code 100610) i.e. 7.70% (International Trade Center, 2020). There is a similar pattern in the tariff wedge between maize (the main ingredient of livestock feed) and frozen chicken meat in the EU. Tariff escalation practiced by large developing countries may depress world price for the processed commodities and impede the exporting counties from processing intermediate inputs (Aksoy and Beghin, 2004). In this sense, Aziz et al. (2017) investigate effective protection in the form of tariff escalation in the major importing countries of the Ghanaian Cocoa. In a dynamic perspective, the relationship between tariff structure in importing countries and the exports of Ghanaian coca is inconclusive generally and each case should be analyzed individually.

Assuming cost pass-through, tariff differential over products of the value chain may promote producers to import unprocessed (primary or intermediate) products and thus, reduces the production cost of the final commodity (McCorriston and Sheldon, 2011). Boysen et al. (2019) report that an increase in the tariff wedge between processed and less processed foods may affect dietary-related problems through changing the retail price of highly processed, energy-dense foods in Sub-Saharan Africa. However, the final effect on consumers varies over genders and income groups. Moreover, tariff escalation applied by a trading partner can be used to evaluate. Using the tariff escalation framework, Antimiani et al. (2011) compare the trading partners of nine African countries in terms

of their preferential trade agreements. This analysis identifies the EU as the most liberal partner while China applies the highest tariff escalation in the bilateral trade with the selected African countries. Additionally, Narayanan & Khorana (2011) focus on tariff escalation effects on the export share of developing countries in the coffee (with little scaling) and cotton (with significant scaling tariff) value chains. The findings do not show a strong effect of tariff escalation on the export shares of developing countries; however, elimination of tariff wedge can improve export shares globally. According to the World Trade Organization (WTO), an import ban is prohibited for member countries. However, exceptions are considered under defined conditions such as safeguarding mechanisms, developing countries exemption, human, livestock, and plant health-related issues (see GATT 1994 article XI). Several papers in the literature discuss the potential consequences of trade bans in various contexts. For instance, the effects of an import ban on Genetically Modified Organism (GMOs) products (e.g., Anderson et al., 2005; Philippidis, 2010; Henseler et al., 2013), a ban to prevent livestock outbreaks (e.g., McDonald and Roberts, 1998; Philippidis and Hubbard, 2001; Rodriguez et al., 2007; Chatterjee et al., 2016; Kutlina-Dimitrova, 2017), and the political-induced import bans (e.g., Boulanger et al., 2016; Banse et al., 2019) are analyzed. Although the existing literature on import bans varies in terms of case studies and potential consequences, mainly CGE-based models are applied.

Chatterjee et al. (2016) report the economy-wide evidence on the EU's import ban on several GM foods produced by India using a modified GTAP (Global Trade Analysis Project) model. Following the EU's ban, the simulation shows that the domestic supply of GM food rises, which changes the trade balance. Due to reductions in the domestic price, the extra GM product supplies might be absorbed by domestic consumers, and finally, the effects on them are minor. In another work by Henseler et al. (2013), the potential impact of a trade ban on soybean exports from Argentina, Brazil, and the USA to the EU are simulated. Using an integrated approach of general and partial equilibrium models, the interaction between agricultural and biofuel sectors to the trade ban is considered. The findings predicted a high feed cost in response to the trade restriction scenario, which affects

poultry and pork sectors the most. To conserve forest resources and environmental degradation, Bosello et al. (2013) analyze the possible consequences of pending EU legislation to ban illegally harvested wood and wood products trade in the EU market. Using a modified CGE model, the author points out that the unilateral EU trade ban may effectively remove illegal timber from the international market. However, this policy may promote illegal logging countries to increase secondary wood production as their products become more competitive (due to price increases) after implementing the ban.

The 2014 Russian agri-food imports ban is one of the recent cases in the literature. In response to the Ukraine conflict and to "protect the national security of the Russian Federation", Russia imposed a temporary ban on agri-food imports from the EU, the USA, Norway, Canada, and Australia (Banse et al., 2019). In this regard, Boulanger et al. (2016) apply a modified CGE model to analyze the short-run consequences of the Russian imports ban. As the findings of the study show, the EU compensates for the ban-related negative shock majorly by Intra EU trade, while Russia ensures the highest income loss due to the ban (approximately €3.4 billion). In a similar context, Kutlina-Dimitrova (2017) reports that the impact of the Russian agri-food ban is negligible on total EU exports using the GTAP model. This limited change may be evidence of a strong "cushioning" effect through redirecting the banned product to the EU internal market. In a recent paper, Banse et al. (2019) show that removing the Russian food import ban may result in a minor change in the agricultural sectors of both Russia and the EU.

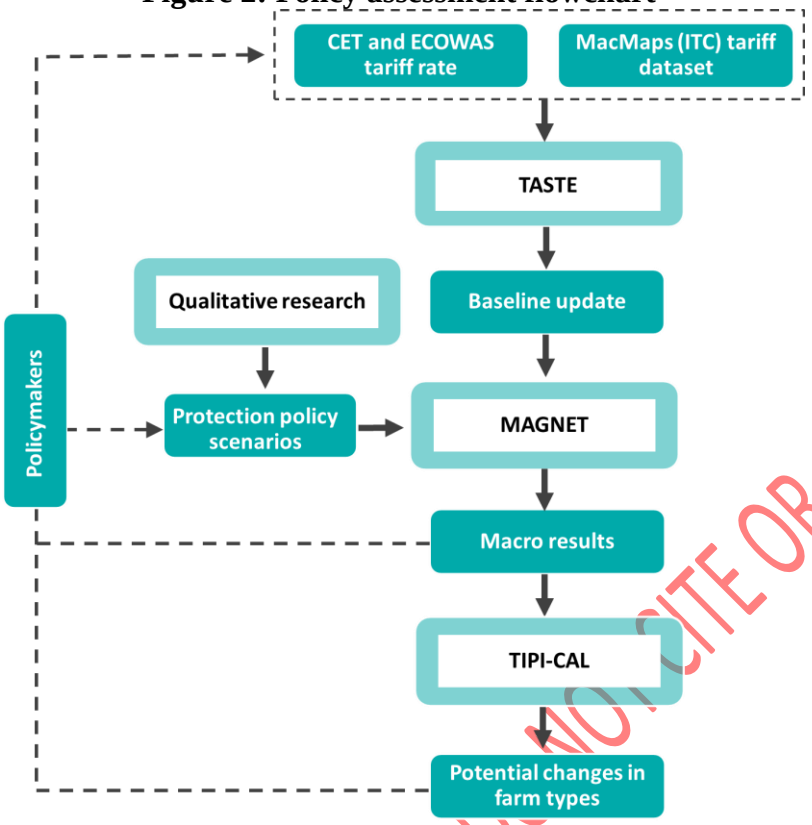
According to the existing literature, the final effects of a partial ban depend on various factors. From a trade perspective, the partial trade ban may affect bilateral trade flows by reallocating market shares in favor of non-banned countries (Nicita, 2008). Thus, the total effects on the domestic market are highly influenced by the share of new competitors and changes in total imports following the partial ban implementation. Although poultry import bans have some common effects in the context of some western African countries, existing literature shows that the policy effects vary from country to country. In Senegal, the imposition of a poultry import ban has resulted in increased domestic

production and consumption (FAO, 2014). According to Arnoldus et al. (2020), the per capita consumption of chicken meat increased from 3.1 kg/person in 2007 to around 5 kg/person in 2019. In contrast, although there has been an increase in domestic production in Nigeria after the ban, Andam et al. (2017) report that the per capita consumption of chicken meat in Nigeria decreased from an annual average of 1.32 kg/person in 1995-1999 to an annual average of 0.85kg/person in 2011–2015. Furthermore, Andriamananjara et al. (2009) and Golub (2012) suggest that the poultry import ban in Nigeria has also led to the significant illegal trade (smuggling) of frozen chicken products from Benin to Nigeria. Additionally, a ban on inputs into poultry production leads to an increase in maize prices. Maize prices tripled from 2007 to 2008 and left many poultry producers unable to provide sufficient feed quantities (Killebrew et al., 2010). According to the above explanations, the difference in the impact of poultry import bans imposed by Nigeria and Senegal shows that the policy implications of a ban policy in Ghana cannot be generalized based on the effects on other countries but should instead be investigated based on the specific local context.

3 Model Framework

Figure 3 presents the process by which our methods are applied. It is based on connecting the qualitative and quantitative analyses for identifying the most important challenges in the poultry value chain and simulating the potential effects of policy decisions on macro and micro levels. Firstly, the tariff dataset is adjusted according to our research question. Secondly, five protection policies are defined according to the implemented government policy and our qualitative research results (semi-structured interviews, focus groups, and Delphi study) in Ghana. The scenarios are identified in the next section. Thirdly, the effects of the scenarios are simulated by using the MAGNET (Modular Applied General Equilibrium Tool) model. Based on the simulation results for production, the potential changes in different farm types are estimated. Continuing the loop, the simulation results provide policymakers with a basis to readjust or modify the trade policies. The scenarios used in this analysis and different parts of the following flowchart are described in detail in the section below.

Figure 2: Policy assessment flowchart



Source: Own.

3.1. Qualitative research

In line with Akunzule et al. (2009), semi-structured interviews were used to collect data from key informants knowledgeable of the poultry value chain in Ghana. Semi-structured interviews were used because they enabled key informants to freely express their points of view, allowing the researchers to gain an in-depth understanding of the various issues related to the poultry value chain. The interviews were conducted in Accra, Kumasi, and the Eastern region. A total of 17 key informants were interviewed. The key informants included input suppliers (hatcheries, feed manufacturers, and veterinary product suppliers), poultry producers, processors (slaughterhouses), and distributors (retailers, wholesalers).

Additionally, the Delphi method was used to identify and rank the challenges facing the value chain identified through an in-depth literature review. According to Grime and Wright (2014), the Delphi method is used to gather a consensus of expert opinions through structured and anonymous group

communication. In our study, the method was used to understand the extent to which poultry meat imports are perceived as a challenge. The Delphi study was composed of a heterogeneous group of experts, including researchers, poultry producers, policymakers, input suppliers, feed millers, hatcheries, and slaughterhouses. The Delphi study was conducted from November to December 2020 in two rounds of emails. In the first round, the questionnaire, which was composed of two questions, was sent to the experts. The first question requested the experts to judge the importance of 14 challenges facing the value chain through a five-point Likert scale. The second question was an open-ended question that requested the experts to identify and judge the importance of other challenges not included in the initial list. The first-round responses were then analysed using the mean, standard deviation, and Kendall's coefficient of concordance and fed back to the experts in Round 2. The responses from the first and second rounds were then compared and a decision to end the study after two rounds was made because the results showed minor changes.

3.2. MAGNET model

A CGE model of the world economy known as MAGNET was used to estimate the potential impacts of two ban scenarios on imports and domestic production. MAGNET is based on the GTAP model and the GTAP database with a particular focus on the global agricultural sectors (Woltjer et al., 2014). MAGNET has been extensively applied by researchers and public institutes to assess the economic implications of agri-food trade policy scenarios (e.g. Banse et al., 2008; Boulanger and Philippidis, 2015; Helming and Tabeau, 2018). Woltjer and Kuiper (2014) provide a detailed description of MAGNET. For this analysis, the latest version of MAGNET is applied that disaggregates poultry products from other livestock products.

In a first step, a baseline is created that includes the phasing in of EU trade agreement between the year 2020 and 2030. The underlying trade policy and macroeconomic assumptions are documented by Hass et al. (2020) in more detail and updated for this analysis. In order to consider Ghana's trade policies, the Common External Tariff (CET) is implemented, and the EPA trade agreement between

the EU and the ECOWAS (Economic Community of West African States) is included in the baseline. As a result, the model approach includes tariff protection for all countries worldwide based on the 2017 protection structure, and by 2030, the data for the EU and ECOWAS countries have been adjusted according to the gradual implementation of trade agreements. For the update of the protection structure, we apply the Tariff Aggregation and Simulation Tool for Economists (TASTE) developed by Horridge and Laborde (2008) and updated by Pelikan et al. (2020). Building on the baseline, five scenarios are created (see Figure 3):

5.Conclusion

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