ICTSD Project on Tropical Products

Composite Index of Market Access for the Export of Poultry from Brazil

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LIST OF ABBREVIATIONS AND ACRONYMS

ABEF   Brazilian Association of Broiler Exports

CIMA   Composite Index of Market Access

HS   Harmonized System

SPS   Sanitary and phytosanitary

SSG   Special Safeguard

TBT   Technical barriers to trade

TRQ   Tariff rate quota

WTO   World Trade Organization

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ABSTRACT

This paper presents an application of the Composite Index of Market Access (CIMA) to illustrate its application for evaluating market access for Brazilian broiler meat exports in relevant importing markets such as the European Union (EU-27), Saudi Arabia, Russia and Japan. The research reported is being prepared as a pilot study commissioned by the ICTSD as part of a work program for developing a "composite index of protection" which accounts not only for tariffs, but also for other protectionist measures that are assuming an increasing importance in determining market access for tropical goods such as non-tariff trade barriers and the impact of domestic subsidies.

The basic ideas and methodological procedure for the calculation of the CIMA were developed by Professor Timothy Josling and presented at an ICTSD Concept note (ICTSD, 2009), where he explains that the main purpose of this index is to emphasize that the issues of major concern within the working initiative could all be encompassed in the term "market access".

The study yields estimates based on data collected from primary and secondary sources about the main costs faced by broiler meat exporters when they sell into import markets. A three year period (2006-2008) was selected for the analysis.

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FOREWORD

Trade barriers are often opaque and difficult to compare. All too often, an exporter faces costs well in excess of a simple tariff when seeking entry to a market. The principles underlying the WTO's July 2004 Framework Agreement, the 2001 Doha Declaration and the Agreement on Agriculture commit Members to reducing barriers to their markets and lowering their tariffs. However, to date, there exist few tools to measure the changes in market access that will take place at the conclusion of the Doha Round, or those that may result from any other trade agreement. The Composite Index of Market Access (CIMA) has been conceived as a tool to help trade policy-makers and other stakeholders to address this challenge.

As part of a work programme that resulted from a dialogue organized with the Institute for International Trade Negotiations in Salvador de Bahia, Brazil, ICTSD commissioned a methodology paper by Prof. Timothy Josling as well as pilot country studies by other experts. The methodology and country studies have been reviewed by government officials, academics, and civil society at two meetings Washington DC. An Advisory Panel has helped refine the CIMA methodology and recommended a list of products and markets to study as part of a set of pilot studies. This study is the first in the series of pilot studies.

The World Bank and IMF have developed a number of indices aimed at measuring trade restrictiveness, as a result of work they conducted to understand the impact of structural adjustment programmes on recipient countries' policies. Additionally, the OECD's Producer Support Estimate (PSE) provides a methodologically consistent means of comparing the level of domestic support on agriculture amongst its members. These tools, though useful for their intended purpose, fail to address the needs of developing country exporters trying to assess the costs they face in entering a given market. CIMA is intended to provide a clear and concise tool for this purpose.

The CIMA project is not intended to provide a comparison of the barriers faced by different tropical products. Rather, the project is meant to illustrate the actual costs faced by exporters of selected tropical products when trying to penetrate markets. While liberalisation through tariff reduction may partially achieve the aim of facilitating access for tropical products, the CIMA project highlights the fact that tariff reductions are only a part of the puzzle that trade policy has to solve.

The findings of the CIMA project can be used in many ways, including ensuring a more rational management of actual barriers to access, and hence, enhancing developing country opportunities to trade. It can also be useful in negotiations for further liberalization. Using the CIMA approach would help shift the focus from the number and complexity of support measures, as well as standards, to a uniform and comparable index so that negotiators may conclude more transparent and equitable trade agreements in the future. We hope this study, and the CIMA initiative, is of import to the reader and of help to the policy-maker.

Ricardo Meléndez-Ortiz
Chief Executive, ICTSD

EXECUTIVE SUMMARY

This study applied the Composite Index of Market Access (CIMA) methodology to compare markets in terms of their relative openness to Brazilian broiler meat exports and also to evaluate changes in market access along a period from 2006 to 2008. The importing markets selected for the analysis included: EU-27; Japan; Russia and Saudi Arabia, which are the greatest importers in the world market at the period selected for the analysis. Three of these, except for Russia, were also recognized as major importers of Brazilian broiler meat.

The CIMA values calculated in this analysis seem consistent with expectations which may be interpreted as an advantage of the method. The EU-27 and Russia presented lower CIMA values, indicating less accessible markets to Brazilian broiler exports compared to Japan and Saudi Arabia. **The lowest CIMA value (63 percent) for the whole period was calculated for Russia suggesting that that the market of this country has been less open to Brazilian broiler meta than all other three markets.** The CIMA values obtained for the EU bloc presented a considerable variation and also the lowest value in 2008, of 66 percent, which might be explained by the tariff reconsolidation that is being introduced to deal with increased imports of salted and processed broiler meat. In fact, the EU-27 market presents the highest level of protection with a relatively diversified set of trade protection instruments including import tariff; tariff quota and safeguards.

Japan and Saudi Arabia use only import tariffs to restrict market access to Brazilian broilers, although applying relatively lower rates than those used by the European Union to protect their domestsic market.

Sanitary and technical requirements have not been identified as important trade restricting instruments for Brazilian exports through the period of the analysis. On the contrary, quality and sanitary aspects of Brazilian poultry seem to promote its participation in relevant importing markets such as Russia, when other countries are not able to comply with the requirements. In fact, with the ban of US poultry exports by Russian authorities in January 2010 due to sanitary issues, Brazilian exports became an alternative in case US supplies fails to comply with the Russian food safety regulations established for poultry meat (restricting the use of chlorine in poultry plants to 0.5 parts per million).

It has also been verified that market access can be different according to the type of the broiler meat export. Chicken cuts is much more protected in the EU-27 (CIMA equal to 60 percent in 2006), for example, than processed meat (CIMA is 90 percent in 2006 and 2007). The same has been observed for Russia. Thus, in EU-27 and Russia the meat categories with highest import volumes are those with the lowest market access composite indicator value, suggesting higher protection. This seems to be indicating that this meat category (chicken cut) is preferred by European and Russian consumers such that a relatively high import quantity has occurred despite of the relatively low market access.

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1. INTRODUCTION

The issue of trade barriers is high on the agenda of many developing countries. These countries would benefit from increased transparency and non-discriminatory rules in the international trading system. International trade researchers have perceived the need to develop indicators that express the different types and modalities of trade restrictions in a singular, transparent and comprehensible basis. Such instruments may be fundamental in establishing a level playing field and improving the efficacy of the trade negotiating process.

Market access investigations have indicated that costs faced by exporters can considerably exceed a simple tariff when seeking entry to a market or expanding its share in the world market (Krissoff, Calvin and Gray, 1997; Duval, 2006). Still, there are few tools available that provide consistent measures of the changes in market access considering a wide spectrum of protectionist instruments (Josling, 2009). The Composite Index of Market Access (CIMA) has been conceived as a tool to help trade policy-makers and other stakeholders to address this challenge.

The OECD (2001) introduced the Market Price Support (MPS) to investigate market access as a part of Producer Support Estimate (PSE). MPS is defined as the percentage of domestic price in importing countries which is equivalent to existent border protection. CIMA identifies the percentage of the importer price that is not subject to importer barriers. More specifically, while MPS measures how import barriers support the producer price in importing countries, the CIMA can be used to measure how much is actually received by the exporter after discounting the import barriers from the price paid by importers. An advantage of the CIMA with respect to the MPS is that it measures import barriers considering the exporter as a reference. MPS measures the support for producers in the importing market provided by protectionist barriers.

This investigation provides a pilot study to illustrate how appropriate is the CIMA methodology to capture the actual costs faced by major broiler exporting countries when trying to penetrate markets of interest. The main purpose of the analysis is to identify potential advantages and limitations associated with the use of the CIMA methodology to evaluate market access with a focus on Brazilian broiler meat exports in four major importing markets, as explained in section 2.3: European Union (EU-27), Japan, Russia and Saudi Arabia.

The paper is organized to introduce the argument that sustains the selection of broiler meat international market as well as the focus in Brazil as an adequate case study considering the objectives of the CIMA methodology, based on an overview of the global market situation described in section 2. Next, data sources and methodology are presented in section 3. Section 4 presents a description of the major trade barriers in the importing countries focused by the analysis. Finally, section 5 identifies the results and presents an interpretation of the calculated values for the CIMA.

2. OVERVIEW OF GLOBAL BROILER MEAT MARKET SITUATION

2.1 Production

Broiler meat is the second most consumed in the world and the first in traded quantities in global markets. Table 1 presents a general picture of broiler meat production for the four major producers in the world context. It also shows the individual and cumulative share of production for the four major suppliers relative to 2009, indicating that production is relatively concentrated in this market. The two major producers, United States and China, are responsible for 39 percent of the global production in 2009. When the Brazilian and the EU-27 production are added, the four sources aggregate 66.0 percent of the world's total.

It can also be verified that the US has sustained its position of largest producer, despite a relatively low growth rate of 0.53 percent (Table 1). Total world production grew at 3.67 percent between 2005 and 2009. Production within the EU-27 countries has also increased at a relatively low rate of 2.07 percent. However, Brazil and China have maintained growth rates of 4.98 and 4.88 percent, respectively.

Table 1. Major producers of broiler meat (Ready-to-Cook Equivalent) in volume (1,000 tons) and growth rate (2005-2009)

Countries	2005	2006	2007	2008	2009	Share 2009	Cumulative	Growth rate (%)
US	15,870	15,930	16,225	16,561	15,980	0.22	-	0.53
China	10,200	10,350	11,291	11,840	12,100	0.17	0.39	4.88
Brazil	9,350	9,355	10,305	11,033	10,980	0.15	0.54	4.98
EU-27	8,169	7,740	8,320	8,535	8,620	0.12	0.66	2.07
Others	19,528	20,919	22,125	23,466	24,035	0.34	1.00	5.45

Source: USDA (2010)

2.2. Major Broiler Meat Exporters

World exports are also concentrated in the broiler market within five major players. Brazil, the United States, the EU-27 (excluding intra-EU trade), Thailand and China are responsible for 92 percent of the total trade between 2005 and 2009 (Table 2). The two largest exporters, Brazil and the US, account for a cumulative share of 75.2 percent of the global exports in 2009. The relative participation of each of these players is presented in Figure 1 which also shows that the export volumes from Brazil and the US somehow determine the global behavior of exports, given their relatively high importance.

Brazil is the leading exporter of broiler meat, although the US has presented a relatively more dynamic export performance with a highest growth rate of 12.3 percent from 2005-2009. Over this same period, global exports grew at 8.80 percent while Brazilian broiler meat exports have increased by 7.83 percent. The data also indicates that despite lower in quantity, Thai exports growth rate outperformed all others. The EU-27 experienced little growth while Chinese exports present a net reduction from 2005 to 2009.

Table 2 – Major Exporters of broiler meat (Ready-to-Cook Equivalent) in volume (1,000 tons) and growth rate; 2005-2009

Countries	2005	2006	2007	2008	2009	Share 2009	Cumulative Share 2009	Growth rate (%)
Brazil	2,739	2,502	2,922	3,242	3,150	0.38	-	7.83
US	2,360	2,361	2,678	3,157	2,997	0.37	0.75	12.29
EU-27	696	690	635	743	720	0.09	0.84	0.84
Thailand	240	261	296	383	385	0.05	0.89	17.27
China	332	322	358	285	250	0.03	0.92	-0.15
Others	464	422	496	608	681	0.08	1.00	8.12
Total	6,831	6,558	7,385	8,418	8,183	1.00		8.80

Source: USDA (2010)

Figure 1 illustrates the relative market share levels and trends for Brazil and the United States. It indicates that despite a decrease in 2009, the market share of US exports are increasing while Brazilian exports declined from 2005 to 2009.

Figure 1. Market share for Brazil and US in the World broiler meat (Ready-to-Cook Equivalent) trade (2005 - 2009)
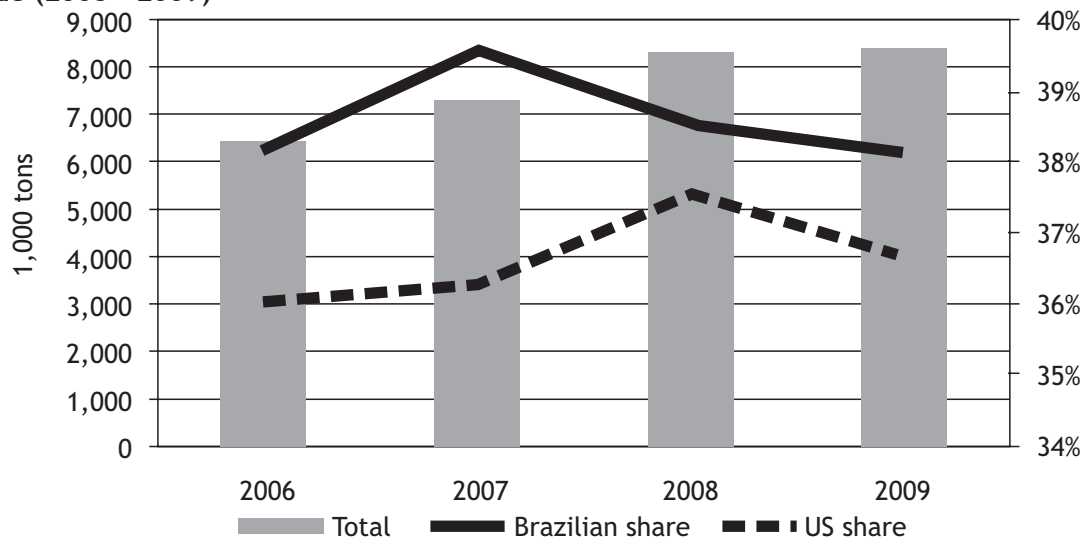
Source: USDA (2010). Elaborated by authors.

Russia is responsible for the largest volume of broiler meat imports, despite the negative growth rate presented through the 2005 to 2009 period. The importing markets that follow are the EU-27, Japan and Saudi Arabia. These were included in the evaluation of the relative market access or barriers presented for Brazilian exports in this analysis (Table 3).

Table 3. Major Importers of broiler meat (Ready-to-Cook Equivalent) in volume (1,000 tons) and growth rate (2005-2009)

Countries	2005	2006	2007	2008	2009	Growth rate (%)
Russia	1225	1189	1222	1159	855	-7.2%
EU-27	609	605	673	712	710	4.8%
Japan	748	716	696	737	700	-1.0%
Saudi Arabia	484	423	470	510	625	7.2%
Mexico	374	430	393	447	490	6.0%
China	219	343	482	399	370	12.8%
Iraq	127	119	176	211	265	22.7%

Table 3. *Continued*

Countries	2005	2006	2007	2008	2009	Growth rate (%)
United Arab Emirates	167	182	238	289	290	17.0%
Hong Kong	222	243	215	236	250	2.1%
Venezuela	104	124	163	352	230	30.1%
Others	1954	2019	2381	2752	2788	10.7%
Total	6233	6393	7109	7804	7573	6.1%

Source: USDA (2010).

As suggested by ABEF in its annual report, the Brazilian Association of Broiler Exports, a more accurate analysis of market access can be conducted using a HS-6 tariff line disaggregation. Broiler meat classification for the study was restricted to broilers equivalent following Harmonized System codes: HS 020711: not cut in pieces, fresh or chilled; HS 020712: not cut in pieces, frozen; HS 020713: cuts and offal, fresh or chilled; HS 020714: cuts and offal, frozen; HS 160232: Processed of fowl of the species Gallus domestic; HS 021099: Meat & edible meat offal, n.e.s., salted/in brine/dried/smoked. These HS-6 level embody all types of tradable broiler meat. Fresh and chilled meat (HS 020711 and HS 020713) are traded only in short distances. This explains the low percentage of their participation in the total volume of broiler meat exports.

Considering the volumes traded in 2008 as a reference, an evaluation of global trade indicates that more than 57 percent of the broiler meat trade refers to meat cut in pieces and frozen (HS 020714) (Figure 2). The second type of meat traded in high volumes is whole frozen (HS 020712) representing 17.31 percent of total volume traded.

Figure 2. World broiler meat trade, by major HS-06; 2008, based on volume
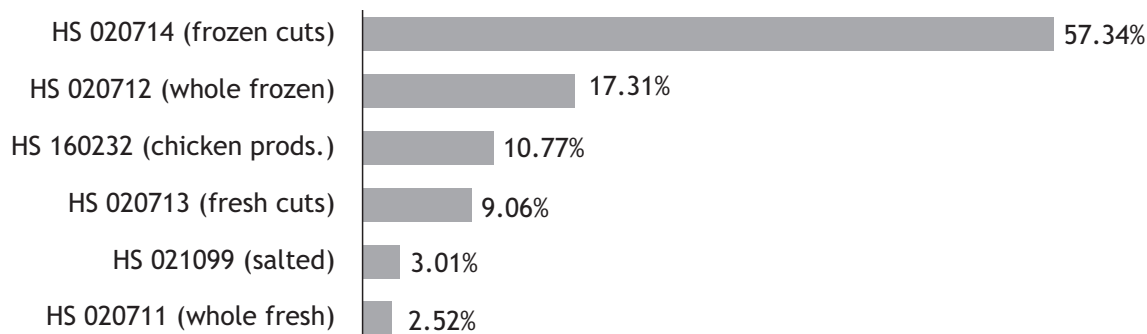
Source: COMTRADE-UN (2010)

2.3. Importers of Brazilian broiler meat

The selection of countries for the analysis was based in two major aspects: (i) the country's relative importance as importers in the global market; and (ii) the relevance as importer of Brazilian broiler meat.

Brazilian broiler meat has reached a considerable number of importing markets as its exports have been shipped to more than 50 countries between 2007 and 2008. Despite its positive performance, it presents a highly concentrated participation in a few markets. The EU-27, Japan, China and Saudi Arabia, are responsible for 48.6 percent of total Brazilian exports (Table 4). These importing markets are also among the 10 major buyers in the global market, represented in Table 3.

Russia has also been included in the investigation due to its importance in the international market (Table 3), although it has not been a major importer of Brazilian products (Table 4).

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Table 4. Brazilian broiler meat exports: rank of 20 main importing countries (in kg); year: 2008

	Country	Quantity (ton)	Percentage Share	Cumulative share
1	EU – 27	530,747.38	14.6%	-
2	Japan	422,180.56	11.6%	26.2%
3	China, Hong Kong SAR	415,272.70	11.4%	37.6%
4	Saudi Arabia	400,373.42	11.0%	48.6%
5	Venezuela	316,620.55	8.7%	57.3%
6	United Arab Emirates	208,415.31	5.7%	63.0%
7	Kuwait	163,631.89	4.5%	67.5%
8	Russian Federation	158,872.75	4.4%	71.9%
9	South Africa	147,359.61	4.0%	75.9%
10	Singapore	75,628.29	2.1%	78.0%
11	Qatar	64,756.83	1.8%	79.8%
12	Jordan	58,490.35	1.6%	81.4%
13	Iraq	56,006.15	1.5%	82.9%
14	Yemen	51,377.87	1.4%	84.3%
15	Oman	50,424.59	1.4%	85.7%
16	Angola	47,309.25	1.3%	87.0%
17	Cuba	32,814.05	0.9%	87.9%
18	Ghana	30,930.44	0.8%	88.7%
19	Viet Nam	27,124.96	0.7%	89.4%
20	Rep. of Korea	21,527.53	0.6%	90.0%
21	Others	365,663.94	10.0%	100.0%
	Total	3,645,528.43		

Source: COMTRADE-UN (2010).

The composition of Brazilian exports (Figure 3) is similar to the world export composition (Figure 2). However, exports from Brazil are more concentrated in frozen broilers. In 2008, meat cut in pieces and frozen (HS 020714) and whole frozen (HS 020712) were the most exported products, with 52.91 percent and 36.66 percent, respectively, of total exports, this is similar to the case of trade in meat over long distances.

Figure 3. Brazilian broiler meat trade , by major HS-06; 2008, based on volume
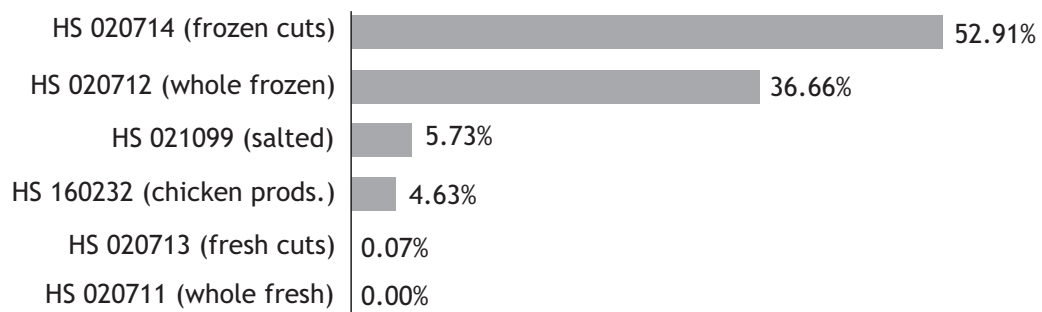
Source: COMTRADE-UN (2010).

A view of the market considering a classi-fication of products at an HS-6 level is useful to interpret the strategic importance of EU imports for Brazilian broiler exports (Table 5). Brazilian chicken cuts exports were slightly higher than 1.9 million metric tons in 2008. The main importing countries of this segment were Japan, Hong-Kong, European Union, South Africa and Russia. Whole chicken exports from Brazil have been concentrated in the Middle East (particularly in Saudi Arabia, United Arab Emirates, Yemen and Kuwait) as well as in other countries like Venezuela, Russia and Angola. The European Union is the main market for Brazilian broiler meat processed and salted (Table 5).

Figures 4 and 5 show a predominance of HS 020714: cuts and offal, frozen in the Brazilian exports for Japan and Russia. For Saudi Arabia, imports of Brazilian broiler classified as HS 020712: not cut in pieces and frozen prevail (Figure 6).

Table 5. Brazilian broiler meat exports in 2008, by type of product and market: World and EU-27; (kg)

	World	EU - 27	Percentage share
Whole	1,336,464.59	16,639.48	1.2%
Cuts	1,931,424.25	173,664.48	9.0%
Processed	168,759.69	132,576.81	78.6%
Salted/in brine	208,879.91	207,866.70	99.5%
Total	3,645,528.43	530,747.38	14.6%

Source: COMTRADE-UN (2010).

Figure 4. Japan broiler meat import from Brazil, by major HS-06, 2008 based on quantity
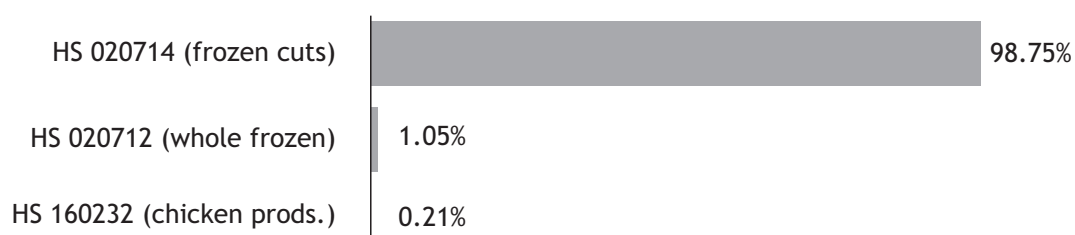
Source: COMTRADE-UN (2010).

Figure 5. Russian broiler meat import from Brazil, by major HS-06, 2008 based on quantity
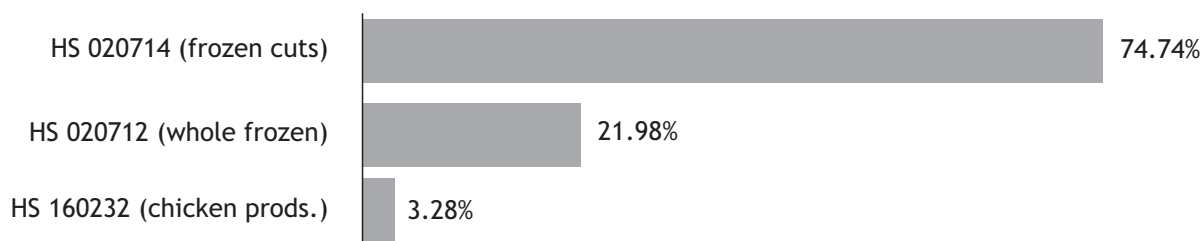
Source: COMTRADE-UN (2010).

Figure 6. Saudi Arabia broiler meat import from Brazil, by major HS-06, 2007 based on quantity

Source: COMTRADE-UN (2010).

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3. BARRIERS TO BRAZILIAN BROILER EXPORTS

This section presents a discussion of the major market access issues related to Brazilian exports of broiler meat into important export markets.

3.1. European Union

The EU is not only the largest importer (the bloc was responsible for 14.6 percent of total Brazilian broiler exports in 2008), but is also known for imposing the highest trade barriers upon Brazilian broiler meat exports. Moreover, Brazil provides 80 percent of EU broiler imports from non-EU countries (ABEF; 2009).

3.1.1. EU - Tariff and tariff quota

The EU bloc has used specific applied and ad valorem tariffs, besides tariff-rate quotas (TRQ) and Special Safeguards (SSG) to restrict Brazilian broiler meat imports as represented in Table 6.

The evaluation of tariff and tariff quota is based on tariff lines disaggregated by eight digit Harmonized System (HS-8) levels (as described in the first column of the Table 6).

Data shows that the highest values of tariffs are applied to broiler meat cut in pieces and offal and, recently, to broiler salted meat, which represent the categories which are most appreciated by European consumers and therefore reach the highest market values. In addition, the tariff levels vary according to the type of product. Quota volume together with in and out-quota tariffs are presented in columns 4, 5 and 6. It can be observed that tariff lines for broiler meat such as HS 020714 (cuts in pieces) were subdivided into 02071410 for boneless cuts and other tariff lines for cuts with bones, such that the highest tariffs are also those with a highest volume of imports by the EU.

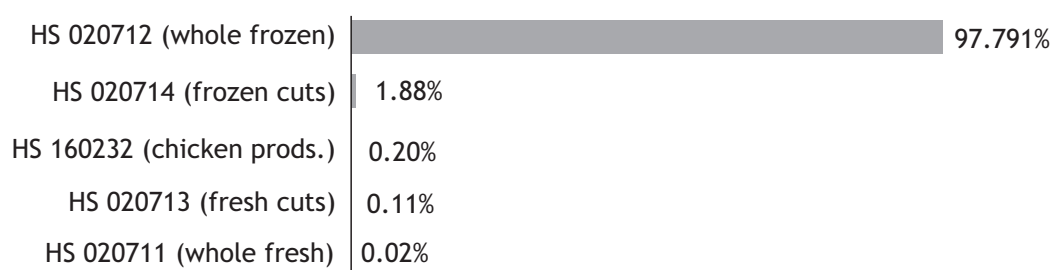There are four EU-27 quotas consolidated in the Uruguay Round for chicken meat which have be identified as: (i) quota 062: for chicken carcasses, fresh, chilled or frozen equivalent to 6,200 tons; (ii) quota 063: chicken cuts fresh, chilled or frozen with a volume of 4,000 tons; (iii) quota 064: cuts of fowls of the species Gallus domestics, frozen; - boneless breasts and cuts thereof; other: 15,500 tons, of which 7,500 t is for Brazil, and (iv) quota 065: boneless cuts of fowls of the species Gallus domestics, frozen: 700 tons.

Table 6. Protection policy for Brazilian broiler meat exports applied by the European Union

Product category	Year	Import tariff – non TRQ	Quota Volumes	TRQ (in)	TRQ (out)	SSG	SPS/ TBT
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Chicken carcasses, fresh, chilled or frozen (02071290)	2006	-	6,200 t*	162 €/t	325 €/t	Yes	
	2007	-	6,249 t*		325 €/t	Yes	
	2008	-	6,249 t*		325 €/t	Yes	
Chicken cuts and offal, chilled or frozen (02071410)	2006	-	700 t + 7,500 t (of a total 15,000t)		1,024 €/t	Yes	
	2007	-	(2,305 t + 17,832 t		1,024 €/t	No	
	2008	-	(2,305 t * + 17,832 t *)		1,024 €/t	Yes	
Processed chicken products (16023219)	2006	867	-		-	Yes	
	2007	867	-		-	No	
	2008	-	79 477 t				

Table 6. *Continued*

Product category	Year	Import tariff – non TRQ	Quota Volumes	TRQ (in)	TRQ (out)	SSG	SPS/ TBT
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(of a total 250 953 t) *	8%	1,024 €/t	No				
Meat & edible meat offal, n.e.s., salted/ in brine/dried/ smoked (02109939)	2006	15.4%	-			-	No
	2007	15.4%	-			-	No
	2008	-	264,245 t *	15.4%	1,300 €/t		No

Note: TRQ represents tariff rate quota; SSG indicates the application of special safeguard; SPS/TBT indicates the application of technical or sanitary notification that affect Brazilian export of the product;
*non-filled quotas.
Source: WTO (2010).

Considering that a quota volume is a minimum limit notified to the WTO, it can be increased, although cannot be reduced. As shown in Table 6, EU increased the quota volume of the tariff line 02071410 from 15,000 tons to 20,137 tons, at least, between 2006 and 2007.

As described by Nassar, Nogueira and Zerbini (2009), new quotas for chicken salted, in brine (2109939) have been notified in 2008. This tariff line has deserved special attention in the negotiations between the EU bloc and Brazil. The EU changed the tariff classification for salted chicken in 2003 and lost a panel in 2005 being forced to use the original classification. Until 2007 the tariff rate was 15.4 percent for this type of product. However, to sustain the market protection the EU decided to rebound the tariff through a tariff re-consolidation process starting from the second semester of 2007. The objective is to include a new quota limiting imports of this product to 1,300 €/t. The same applies for the cooked chicken and processed turkey. Other changes in the quota volume were also introduced when Bulgaria entered the EU in 2007.

An important characteristic to be observed while evaluating the tariff quotas is the administration method adopted. For broilers, the EU provides a license upon demand which allows importers to acquire certain volumes within a quota but restricts the ability of exporters to negotiate prices. The EU legislation authorizes the transfer of import

licenses among importers (underwrite). That transfer, however, can be interpreted as an imperfection of the EU quota system since it allows the price paid by importers to buy licenses to be incorporated by the import price, therefore punishing exporters. As a result, the quota rent is appropriated by the importer.

Still, the quota rent exists only when imports are inside the quota established by the importing country. In 2007 and 2008 imports for the tariff lines 02071290 were 14,896 tons and 11,556 tons, respectively, and for the tariff line 02071410 it has been of 92,487 tons and 103,487 tons, respectively (WTO, 2010). As can be observed in Table 6 the quota volumes were lower than imports in both cases. Therefore, for all volumes imported by quota the importer receives the quota rent.

3.1.1. EU - Safeguards

Another interesting characteristic of European imports is that the bloc has reserved the right to impose a price based special safeguard (SSG trigger price) for chicken imports, which represents an additional tariff over the applied tariff. Therefore, with the application of the SSG the effective tariff becomes higher than the tariff consolidated at the WTO.

The special safeguards applied by the European Union can be calculated as the value equivalent to the application of the safeguard through the years of the analysis (2006-2008). These were obtained calculating the value charged for

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the imports originating from Brazil. The SSG application mechanism is described in Table 7, following the description of Article 5 of the Agreement of Agriculture (Annex 1ª of the Uruguay Round) and according to information obtained directly from the ABEF.

Table 7. Description of EU Special Safeguard (SSG) mechanism for broiler meat import

D (%) = [price trigger (notified to the WTO)* - Import CIF price]/ Import CIF price	Additional tax charged (due to SSG rule)
D < 10%	0%
10% < D < 40%	30%
40% < D < 60%	50%
60% < D < 75%	70%
75% < D	75%

Note: * The price trigger used to compare with the CIF import price corresponds to an average of the period between 1986 and 1988 that alter to each tariff line. For example, to tariffs lines 0207.12.90 and 0207.14.10, the price trigger equivalent are 1,312 and 3,335 Euros per ton , respectively.
Source: WTO (1995).

3.2. Russia

Although Russia has not yet acceded to the WTO, it has agreed, as an observer, to comply with some rules for its imports of broiler meat. In December 2005 the Russian government adopted a set of resolutions (numbers 728–733) establishing tariff quotas (volumes, intra and out-quota tariff rates) for meat to be applied for the period from 2006 to 2009 (ICONE, 2010). Table 8 describes the tariff quotas (TRQ) for broiler meat with the final resolutions established for reference period, as well as volumes proposed for a following three-year period (2010 to 2012).

Table 8 shows that tariff quotas have determined that the quantity of Brazilian broiler meat allowed into the Russian market is relatively low, which is included in category "others." However, the Resolution 733 of the Russian government restricted import volumes from countries subject to partial or total restrictions by the Russian Federal Service of Veterinary and Phytosanitary Supervision due to epizootic problems. To assure domestic supply, trade operators could obtain a license to import the same volume from other countries. Brazilian meat became an alternative source for Russian of broiler meat imports particularly when these restrictions were applied to US broiler exports (restricting the use of chlorine in poultry plants to 0.5 parts per million).

It is important to note, however, that this resource was not related to the general quota established for the country chosen to substitute imports subject to restrictions due to sanitary problems.

Table 8. Russian tariff quotas for broiler meat (code 0207) determined to be applied for 2006 – 2009 and predictions for 2010 – 2012

Years	TRQ	Origin of Russian meat imports				
		EU	US	Paraguay	Others	Total
2006	Volume ('000 tons)	220.6	841.3	5	63.9	1,130.8
	Tariff in-quota	25%, but no less than 0.2 Euros/kg				
	Tariff out-quota	60%, but no less than 0.48 Euros/kg				
2007	Volume ('000 tons)	228.6	871.4	5	66.,2	1,171.2
	Tariff in-quota	25%, but no less than 0.2 Euros/kg				
	Tariff out-quota	60%, but no less than 0.48 Euros/kg				
2008	Volume (mil tons)	236.4	901.4	5	68.8	1,.211.6
	Tariff in-quota	25%, but no less than 0.2 Euros/kg				
	Tariff out-quota	60%, but no less than 0.48 Euros/kg				

Table 8. *Continued*

Years	TRQ	Origin of Russian meat imports				
		EU	**US**	**Paraguay**	**Others**	**Total**
2009	Volume ('000 tons)	185.8	750	3.8	12.4	952
	Tariff in-quota	25%, but no less than 0.2 Euros/kg				
	Tariff out-quota	95%, but no less than 0.8 Euros/kg				
2010	Volume ('000 tons)	144.3	600.0	-	35.7	780
2011	Volume ('000 tons)	111	446.4	-	42.6	600
2012	Volume ('000 tons)	101.75	409.2	-	24.9	550

Source: ICONE (2010).

3.3. Japan and Saudi Arabia

Japan and Saudi Arabia have been using import tariffs to restrict market access to Brazilian broiler exports, however at relatively lower rates than those used by other relevant importing markets such as the European Union bloc.

Given that the only border protection used by Japan is the tariff, the CIMA was calculated based only on this protectionist instrument. Tariff rates imposed by that country for fresh and processed broiler meat from Brazil of 11.9 and 6 percent, respectively. Japan has not established tariff quota or applied SSG for broiler meat imported from Brazil during the period of the analysis (2006-2009).

Similar to what was identified for Japan, Brazilian broiler meat exports were not subject to restrictions in the Saudi Arabia market. Until 2006, though, the country applied a complex tariff for fresh meat (20 percent or one Saudi ryial per kilogram (SR1/kg); whichever is higher). Through 2007 and 2008 the applied tariff was reduced to a 5 percent ad valorem tariff for all broiler imports. There were no special safeguards rates identified, nor technical and sanitary notifications for broiler meat imported from Brazil into Saudi Arabia.

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4. DATA AND METHODOLOGY

4.1 Definition of Measurement Unit

In order to calculate CIMAs it was necessary to to transform the products into an equivalent unit of measure since broiler meat is imported under different tariff lines that represent products in different forms (whole, cuts, processed and salted). For that purpose, after measuring the value of the protection for each product, these were subject to equivalence coefficients to obtain a homogeneous reference. The coefficients used in this analysis considered 1.0 for whole; 1.4 for broiler cuts; 1.45 for salted meat, in brine; and processed meat transformation coefficient that can vary from 0.8 to 0.35 for processed broiler.

The private sector, mainly Brazilian Association of Poultry Exports (ABEF) was the primary source for information regarding problems associated with market access to relevant importing markets in the global scenario. Other relevant data sources have been WITS/ Comtrade for trade flows, WTO for tariffs and tariff quotas for Members, complemented by official public data on third market regulations, barriers and distortions, Russian tariffs and tariff quotas, SSG for European imports, and the International Monetary Fund (IMF) for exchange rates.

4.2 Calculation of the CIMA

The calculation of the Composite Index of Market Access (CIMA) for this case study was delineated to identify the percentage of the importer price that is not subject to importer barriers. Therefore, the full range of costs and protection faced by the Brazilian broiler meat exports when selling in each relevant importing market was included in the calculation, together with the price paid by importers.

According to the guidelines, a the CIMA calculation must include duties and taxes paid to the importing country government (particularly border measures such as tariffs and tariff quotas besides excise duties on domestic markets) as well as expenses to comply with health and safety standards required in the market of destiny. In addition, subsidies provided to production and export of the good concerned should also be incorporated to provide a reliable estimate of relative market access for relevant competing suppliers (including domestic producers in the importing country whenever appropriate). CIMA represents the relative market access as a measure of how much is actually received by each exporter after discounting the import barriers from the price paid by importers.

A representation of the CIMA suggested by Josling (2009) can be obtained from a basic calculation of the barriers to market access (BMA), as indicated in equation (1):

$$BMA = EDT + OMC + (PLC - PLP) + \quad (1)$$
$$+ SPC + MTD - SUB$$

Where: EDT is the excise duty paid on sales in importing country; OMC is the other marketing costs including shipping and handling; PLC represents private label costs that are incurred in meeting the standards demanded by the private sector; PLP is the price premium that is received by the exporter for fulfilling the private standards where these are over and above the publicly required SPS/TBT standards; SPC is the costs associated with meeting SPS and TBT requirements; MTD stands for tariffs and other duties paid on importation and; SUB is any subsidies paid by the importing country to producers.

Considering that PRM is the price exporters receive by unit of the product as it enters the importing market (excluding subsidies), the BMA can be expressed as a proportion of total returns, such as:

$$BMA\ prop = (BMA/PRM) \quad (2)$$

Or can be expressed in percentage terms as:

$$BMA\% = (BMA/PRM)*100 \quad (3)$$

Based on the BMA, the CIMA provides indication of costs with market access incurred by each exporter by the extent it falls short of 100:

$$CIMA = (100-BMA) \qquad (4)$$

For the present study, considering the characteristics of the importing markets selected for the analysis, the price considered as a coherent account as a basis for calculating the BMA was represented as:

$$PRM = (PRX + OMC) + (SPC + MTD) \qquad (5)$$

$$PRM = (CIF\ unit\ value) + (SPC + MTD) \qquad (6)$$

Which expresses the price at which the product is sold in the importing country as the sum of the CIF unit value (which, in turn, is equivalent the sum of the export price (PRX) plus transport and other marketing costs (OMC)) to the unit cost of protectionist barriers (SPC +MTD).

Some terms have been omitted from the base price equation suggested by Josling (2009) given the characteristics of the markets selected for the analysis. Excise duties, for example, were not a concern in Brazilian broiler meat exports to its major importing markets, therefore was not considered. Subsidies to exports (SUB), price premium (PRP) and label costs (PLC) were also not identified as important factors to compose a price ladder. Therefore, it seemed more coherent to express the price starting from the unit value of imports in each market (PRM). In this form, cost of production (COP) and exporter profits (PRF) were not relevant for the calculation of the CIMA.

The barriers to market access identified as important for this study were: tariffs (specific and/or ad valorem); tariff quotas (including tariffs in and out quota, as well as the quota volume); and safeguards. Of all these factors, only specific tariffs values are promptly available. The ad valorem equivalent of tariffs was transformed in specific values by multiplying the import price (CIF) by the ad valorem percentage.

When the country presents a tariff quota, the equivalent value calculation depends on the efficiency of the quota that was effective for each period or year of the analysis. When the country imports were lower than the quota volume, then the import is subject to an in-quota rate, which is equivalent to the tariff specified as a protectionist measure to imports. In the case that imports are higher than the quota volume, the access to the market is subject to an extra or out-quota. Still, when imports are equal to the volume established for the tariff quota, the protection must be varying between the in and the out-quota tariff. When this is the case, the domestic price of the product must be used to estimate the effective degree of protection represented by the volume restriction.

After calculating the CIMA for each type of meat, as classified at HS-8 level, these were consolidated into an annual CIMA for each country by calculating a weighted average. The weighted average considered the volume of imports and the equivalence coefficient between the different meat types.

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5. RESULTS AND DISCUSSION

Table 9 presents the CIMA for Brazilian broiler meat exports applied to four major importing countries (Japan, Saudi Arabia, EU-27 and Russia). Three of these are the major importers from Brazil (Japan, Saudi Arabia and EU-27). According to the composite indicator results, market access for Brazilian broiler meat is higher in Japan and in Saudi Arabia. The CIMA for Japan presented a stable value of 89 for the three years of the analysis. For Saudi Arabia, the index increased from 83 to 95 from 2006 to 2007 while for 2008 there was no data available.

Russia also presented a relatively stable value for the indicator in all three years but with a lower CIMA of 63, suggesting that its market has been less open to the Brazilian product than all other three markets evaluated through the 2006 to 2008 period.

The CIMA values obtained for the EU bloc presented a considerable variation through the period and the lowest value in 2008, of 66, which might be explained by the tariff reconsolidation that was implemented to deal with increased imports of salted and processed broiler meat.

The results reported in Table 9 were obtained considering a weighted average, by type of broiler meat imported by each country. It should be observed, however, in the results reported at Tables 10 to 13 in the Appendix, that the level of protection upon imports varies according to the type of meat disaggregated by tariff line at an HS-8 level.

Table 9. CIMA results for broiler meat exports from Brazil to its four major importing markets: EU, Saudi Arabia, Japan and Russia; period: 2006 - 2008

CIMA			
	Years		
Countries	2006	2007	2008
EU-27	74	82	66
Saudi Arabia	83	95	n.a.
Japan	89	89	89
Russia	63	63	63

Note: CIMA for exports from Brazil into Saudi Arabia could not be calculated for 2008 due to a lack of trade data.
Source: Research results

For the European Union, the level of market access indicated by the CIMA value for salted and processed broiler meat seems higher than for fresh meat. In addition, it can be verified that the level of market access for whole broilers is higher than for cuts in this same market (Table 10). This could be somehow unexpected, considering that consumers' preferences and market prices are higher for cuts of broiler. However, the evaluation suggests that the markets for cuts with higher preference by consumers and also higher prices are more protected, being subject to higher tariffs (in absolute and relative terms). Despite of the protection, an evaluation of the EU import volumes shows clearly that it has increased more for cuts through the years of the analysis.

The importance of the special safeguard (SSG) mechanism for shaping EU-27 imports from Brazil must also be stressed. About 20 percent of the European market protection of broiler meat cuts is due to the application of an additional tariff through the SSG mechanism (Table 10). In this context, however, the more competitive exporters are more penalized since the SSG mechanism establishes higher additional tariffs for lower import prices. As can be observed, the tariff in 2006 was higher than in the following years. Since price reached higher values in 2007, the SSG was triggered, but in a lower value (Table 10).

An evaluation of the Russian market in Table 11 shows that, similar to what is observed for

the EU (Table 10), the meat categories with highest imported quantities are those with the lowest market access composite indicator value (Table 11). Therefore, the highest CIMA is associated to processed meat which represents only a marginal participation in volume as shown in Figure 5.

The Saudi Arabian broiler meat imports for the HS 02071200, that concentrates most of the countries' imports from Brazil, present a CIMA value relatively high in 2007 (95). A low BMA (and therefore high CIMA) was observed particularly for processed meat, which is also the type of broiler meat imported in lowest volumes (Table 12).

Table 13 shows that the calculated CIMA values are equal in the case of the Japanese market, of 89 percent, both between the different types of imported broiler and between the years taken for the analysis.

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CONCLUSIONS

This work has shown that the CIMA procedure is useful to evaluate the aggregate impact of protectionist measures applied at a given period of time from a perspective of the exporting country into selected importing markets. Market access costs are expressed as a proportion of the price received by the exporter in the importing markets. This is an advantage compared to other similar indicators. The procedure to calculate market price support (MPS), for instance, seems to have a similar purpose of that introduced by CIMA. However, it provides information restricted to players at the importing market (expressed as the amount of the domestic producer price which is being paid by the overall economy in the form of protectionist measures).

The results of the CIMA methodology applied to Brazilian broiler exports indicated that it seems a better indicator for market access analysis between countries and for a same importing market through time than MPS existent. For example, MPS to poultry meat in EU was 35 percent of the production value in 2006 and CIMA for broiler meat in Brazil calculated in this study was 60 percent of the import price in the same year. Therefore, while MPS shows that EU poultry meat producer receives 35 percent of support from border protection, CIMA shows that Brazilian exporters of the broiler cuts suffers a 40 percent of border protection upon prices. Countries with the lowest CIMA values are also those with relatively less accessible markets for Brazilian broiler exports.

Therefore, the CIMA can also been considered useful by fulfilling the need to compare the aggregated impact of tariffs, tariff quotas and special safeguards applied to Brazilian broiler exports which would not be possible using other trade indicators currently available.

Another advantage of an application of the CIMA is that it allows the evaluation of the actual protection faced by exporters, considering a disaggregation of products. For example, when protection is measured in aggregate terms for the EU the CIMA value was 74 but when calculated for cuts this value was 60 in 2006. This seems to be an important advantage of the method.

Relevant barriers identified for the Brazilian broiler export in the major importing markets from 2006 to 2008 are import tariffs, tariff rate quotas and safeguards. Sanitary and technical barriers have not been identified as relevant impediment for these exports through the period of the analysis. On the contrary, quality and sanitary aspects of Brazilian poultry seem to promote its participation in relevant importing markets such as Russia, when other countries are not able to comply with the requirements. In fact, with the ban of US poultry exports by Russian authorities in January 2010 due to sanitary issues, Brazilian exports become an alternative when US supplies failed to comply with the Russian food safety regulations established for poultry meat.

Although appropriate to express the result of trade policy actually applied, the CIMA cannot be used to predict policy changes. As observed in the EU-27 context, if import prices were higher than those observed through the years taken for the analysis, a reduction in import barriers could be associated to higher CIMA values.

It has also been observed that there were relatively low exported volumes associated with high CIMA values and relatively high exported volumes linked to low CIMA values, particularly regarding Brazilian exports to the EU market. This seems to be indicating that it was possible to identify this despite the seemingly high level of exports of broiler meat, in aggregate terms into relevant markets such as the EU, the Brazilian exports of specific types of broiler meat, such as broiler cuts which are preferred and assume a higher price in the importing market have clearly been subject to a relatively low market access.

The method has presented some limitations regarding the proposal introduced by Josling

(2009). It does not solve the problem regarding the adequate expression of some restrictions to access markets that have increasingly affected trade flows. This is particularly important for sanitary and technical requirements introduced in the form of norms or regulations. The identification of actual costs related to these issues can vary within exporting firms at a given country which complicates the identification of the portion of the price received in the importing market by an exporting country.

The study conducted has also shown that there might be limitations regarding the way tariff lines are specified. For instance, in the case of broiler meat exports from Brazil to the EU there are several tariff lines in the importing market applied at an 8 digit HS disaggregation while Brazilian exports are expressed at a 6 digit HS disaggregation (eg. While Brazilian exports consider breast and wings as broiler cuts, the EU might apply different tariff lines for each of these meat peaces). This introduces a problem to consider the price ladder as proposed by Josling (2009), particularly regarding specific differences between FOB and CIF prices, processing and other production costs figures.

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Table 10. European Union Broiler meat imports from Brazil - Price Ladder (Euros per ton)

Tariff line		02071290			02071410			02109939			16023219		
Price Component	Description (Year)	2006	2007	2008	2006	2007	2008	2006	2007	2008	2006	2007	2008
	Cif price	927.6	1103.0	1255.2	1970.3	2208.9	2199.7	1815.5	2042.2	2092.8	2112.4	2211.3	2555.8
MTD	Import duties and other charges	325.0	325.0	325.0	1024.0	1024.0	1024.0	279.6	1300	1300.0	230.3	241.0	1024.0
	SSG	76.0	23.3	76.0	315.5	237.8	240.5	0.0	0.0	0.0	0.0	0.0	0.0
PRM	Importer price	1328.5	1451.3	1656.2	3309.8	3470.7	3464.2	2095.1	3342.2	3392.8	2342.7	2452.3	3579.8
BMA	Barrier Market Access	401.0	348.3	401.0	1339.5	1261.8	1264.5	279.6	1300	1300.0	230.3	241.0	1024.0
BMAP	Barrier Market Access Percentage	30%	24%	24%	40%	36%	37%	13%	39%	38%	10%	10%	29%
	Weight by type of meat	1.0	1.0	1.0	1.4	1.4	1.4	1.4	1.4	1.4	0.8	0.8	0.8
CIMA		70%	76%	76%	60%	64%	63%	87%	61%	62%	90%	90%	71%

Table 11. Russian broiler meat imports from Brazil - Price Ladder (USD per ton)

Tariff line		0207			020712			020714			160232		
Price Components	Description (Year)	2006	2007	2008	2006	2007	2008	2006	2007	2008	2006	2007	2008
	CIFprice	1172.0	1262.8	1742.3	1027.7	1067.4	1290.9	1180.50	1286.50	1711.80	1471.50	2188.30	2725.50
MTD	Import duties and other charges	703.2	757.7	1045.4	616.6	640.5	774.6	708	772	1027	586	586	586
	TRQ	703.2	757.7	1045.4	616.6	640.5	774.6	708	772	1027	586	586	586
PRM	Importer price	1875.2	2020.5	2787.7	1644	1708	2066	1889	2058	2739	2058	2774	3312
BMA	Barrier Market Access	703.2	757.7	1045.4	616.6	640.5	774.6	708	772	1027	586	586	586
BMAP	Barrier Market Access %	38%	38%	38%	37%	38%	38%	38%	38%	38%	28%	21%	18%
	Weight by type of meat	1	1	1	1	1	1	1.4	1.4	1.4	0.8	0.8	0.8
CIMA		63%	62%	62%	63%	62%	62%	63%	63%	62%	72%	79%	82%

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Table 12. Saudi Arabia broiler meat imports from Brazil - Price Ladder (USD per ton)

Tariff line		02071200			02071490			02109990			16023200		
Year		2006	2007	2008	2006	2007	2008	2006	2007	2008	2006	2007	2008
Price composition	Description												
	CIF price	1288.0	1501.9		1703.5	1900.5		3104.92			1341.82	2642.03	
MTD	Import duties and other charges	257.6	75.1		340.7	95.0		372.59			67.09	132.10	
	TRQ	258	75		341	95		373			67	132	
PRM	Importer price	1545.6	1577.0		2044	1996		3478			1409	2774	
BMA	Barrier Market Access	257.6	75.1		340.7	95.0		372.6			67.1	132.1	
BMAP	Barrier Market Access Percentage	17%	5%		17%	5%		11%			5%	5%	
	Weight by type of meat	1	1		1.4	1.4		1.4			0.8	0.8	
CIMA	Composite Index Market Access	83%	95%		83%	95%		89%			95%	95%	

Table 13. Japan broiler meat imports from Brazil - Price Ladder (USD per ton)

Tariff line		020712000			020714220		
Year		2006	2007	2008	2006	2007	2008
Price composition	Description						
	CIF price	1331.7	1548.5	2068.8	1868.1	1959.4	3121.8
MTD	Import duties and other charges	158.5	184.3	246.2	222.3	233.2	371.5
	TRQ	158.5	184.3	246.2	222.3	233.2	371.5
PRM	Importer price	1490.1	1732.8	2315.0	2090	2193	3493
BMA	Barrier Market Access	158.5	184.3	246.2	222.3	233.2	371.5
BMAP	Barrier Market Access Percentage	11%	11%	11%	11%	11%	11%
	Weight by type of meat	1	1	1	1.4	1.4	1.4
CIMA	Composite Index Market Access	89%	89%	89%	89%	89%	89%

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