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Impact of the Trans-Atlantic Trade and Investment Partnership upon U.S. Beef Exports

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Abstract *With the on-going negotiation of the Trans-Atlantic Trade and Investment Partnership (TTIP) between the United States (US) and the European Union (EU), there are many issues in which both governments are having difficulty in reaching adequate and fruitful compromise. In regards to market access, specifically involving EU imports of US Non-Hormone Treated Cattle (NHTC) beef, the EU has not yet committed to the specifics for this particular issue. This paper presents a potential TTIP proposal with respect to EU imports of US beef. Basing the framework of the primary policy initiative off a similar concession that was granted to Canada by the EU in the Canada – European Union: Comprehensive Trade and Economic Agreement (CETA). This policy proposal will be demonstrated and illustrated utilizing economic, quantitative, and qualitative analysis.*

Key words Harmonized Tariff Schedule (HTS), market access, price elasticity, quota rents, Tariff-Rate Quota (TRQ)

JEL Codes: D92, F21

1. Introduction

With the on-going negotiation of the Trans-Atlantic Trade and Investment Partnership (TTIP) between the United States (US) and the European Union (EU), there are many issues in which both governments are having difficulty in reaching adequate and fruitful compromise. What exactly is the TTIP negotiation? TTIP is a free trade agreement (FTA) currently being negotiated between the governments of the United States and the European Union in the attempts at promoting increased commercial activity and economic co-operation between the two. Much of the agreement encompasses increased market liberalization involving trade in goods, trade in services, regulatory harmonization, and an expansion in investment practices. The US and EU are both among two of the most advanced and integrated economies in the world. Reflected through their strong belief and implementation of consumer protection, a well-established and developed legal system, and advanced investment practices; this partnership has the potential of representing a sound and transparent business and commercial template in regards to the augmenting the established international trading regime.

A sector of strategic importance for each market is that of agriculture. More specifically, there is currently and has been a dispute regarding the quality and safety of US hormone-treated beef that is imported into the EU market. The United States is the largest agriculture exporting economy in the world and in 2013 total agriculture exports equaled $145 billion and only $10 billion of those exports went into the EU market (United States Trade Representative, 2015).

In 2015, US beef production totaled 11.9 million tonnes, whereas US beef exports[1] into the EU market equaled only 28,450 tonnes (ITC, 2015). As of now, the EU is not a large market with respect to US beef exports, however with the conclusion and enforcement of the TTIP agreement, the US could expand its beef exports into the EU market. What realistic and reasonable potential does TTIP offer to US beef exports into the EU?

2. Literature review

The EU-US Beef Dispute

In 1989, the EU imposed a ban on meat product imports from animals treated with six growth promoters from the US. Soon after, the US responded with an imposition of retaliatory tariffs upon imported products from the EU valued at $93 million, which was in effect until May 1996 (Devereaux *et al*., 2006). Shortly after, the EU declared that the ban would stay in place and the US initiated another case against the EU under the Agreement on Sanitary and Phytosanitary Standards (SPS Agreement)[2], under the newly established World Trade Organization (WTO) resulting from the conclusion of the Uruguay Round. Within the dispute, the panel determined that the EU had not scientifically proven that the hormone in question posed a health risk to consumers. In 1999, the US (and Canada) were authorized by the WTO to suspend tariff concessions under GATT Article II on EU imports totaling a value of $117 million (Matthews, 2015). In 2003, the EU instituted regulations that permanently banned one of the six growth hormones and had applied a provisionary ban on the other five growth hormones. With this new measure, the EU claimed that it had come into conformity with its WTO

[1] For the purposes of this paper U.S. beef exports constitutes Harmonized Tariff Schedule (HTS) Code 0201: Meat of Bovine Animals fresh or chilled, and HTS Code 0202: Meat of Bovine Animals frozen.

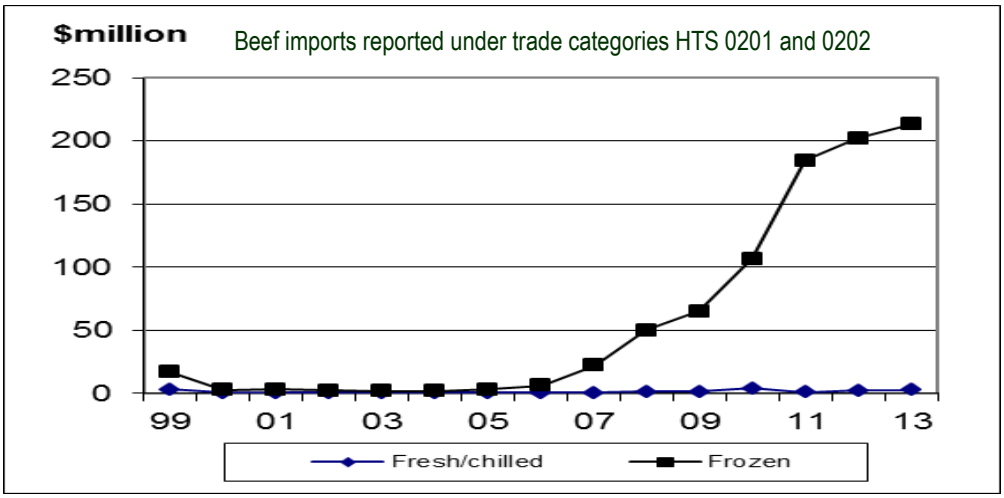
[2] Agreement on the Application of Sanitary and Phytosanitary Measures, 1867 U.N.T.S.493

obligations. However, this new legislation introduced by the EU was not accepted by the US, who determined to keep a higher-level of tariffs applied towards EU imported goods.[3]

In response to these additional taxes imposed by the US, in 2004 the EU initiated a separate WTO case seeking a removal of the additional duties applied to EU imported products. The dispute between the two parties was settled using the WTO Dispute Settlement Mechanism and in 2008 the Appellate Body gave their ruling stating that the US could maintain its trade sanctions against certain EU imports, as well as the EU could maintain its ban against certain hormone-treated beef imports.[4] Basically, with the AB ruling, the practices in question exercised by each respective government were deemed to be consistent under WTO provisions. Due to the fact that the dispute had reached an impasse (even with official WTO litigation), shortly after the EU and US came to a consensus by drafting a Memorandum of Understanding (MOU), which was signed and agreed upon in 2009. The MOU served as a mutual agreement involving three different phases in regards to how concessions would be achieved. The MOU[5] reads as follows:

- Phase I (August 2009 – August 2012): lifting of US retaliatory sanctions on some EU agricultural products in exchange for the opening of a zero-duty tariff-rate quota (TRQ) for high quality hormone-free beef ('High Quality Beef') (20,000 tonnes). The new quota was in addition to the pre-existing 11,500 tonnes HQB beef' allowed entry into the EU. The new HQB quota is specifically for grain-fed beef.
- Phase II (August 2012-August 2013): (a) expansion of the new HQB quota to 45,000 tonnes and (b) agreement by the US to suspend all additional tariffs on EU imports arising from the WTO dispute. The EU quota is administered on a most-favoured nation basis. Over time, additional countries have gained access to this quota which is now shared by six countries: Argentina (added in 2014), Australia (2010), Canada (2010), New Zealand (2011), the United States (2009), and Uruguay (2011).
- Phase III foresees that (a) the EU maintains the HQB quota at 45,000 tonnes, and (b) the US removes its trade sanctions, leading to a long-term resolution of the dispute. Phase III will begin with the official notification to the WTO Dispute Settlement Body of the withdrawal of the case. Parties have not yet reached agreement to enter this phase.

Further discussion of the MOU involves the composition of US beef exports. Involving a category posed in the MOU as "High Quality Beef" (HQB) and/or the US categorization – non-hormone treated cattle "NHCT" beef. According to the MOU, HQB/NHTC beef composition constitutes:



Source: Compiled by CRS using Global Trade Atlas data. EU-reported product imports to EU-27 countries, HTS 0201 (fresh/chilled beef) and HTS 0202 (frozen beef), nominal U.S. dollars.

Figure 1. EU-Reported Beef Imports from the United States, 1999-2013 (Johnson, 2015)

Beef cuts obtained from carcasses of heifers and steers less than 30 months of age which have only been fed a diet, for at least the last 100 days before slaughter, containing not less than 62 percent of concentrates and/or feed grain co-products on a dietary dry matter basis that meet or exceed a metabolisable energy (ME) content greater than 12.26 megajoules (MJ) per one kilogram of dry matter. The heifers and steers fed this diet shall be fed, on average, not less than 1.4 percent of live body weight per day on a dry matter basis (Johnson, 2015). Even with this additional measure, the EU market of beef

[3]Ibid, TTIP and the Potential for US Beef Imports.
[4] Appellate Body Report, United States - Continued Suspension of Obligations in the EC-Hormones Dispute WT/DS320/AB/R (October 16, 2008).
[5] Memorandum of Understanding, European Communities – Measures Concerning Meat and Meat Products (Hormones), WT/DS26/28 (September 30, 2009)

imports has changed over the years with respect to shifts in market behavior (e.g. mostly involving EU consumer preferences in taste with regard to US non-hormone treated cattle "NHTC" beef exports). In regards to the composition of US beef exports into the EU, figure 1 illustrates EU imports of US beef from 1999-2013 with a composition makeup of HTS 0201 and HTS 0202. As illustrated above, EU imports of US beef clearly represent an increased preference of frozen beef to that of fresh/chilled beef, which has remained at a rather static level over the past decade. This is important to note because there is a distinct preference illustrated here, which will affect the price of the product.[6]

3. The EUs Tariff Rate Quota on US Non-Hormone Treated Cattle (NHTC) Beef

In accordance with the MOU reached by the US and EU in 2009, one of the stipulations outlined in Phase I of the MOU stated that in-exchange for the US lifting of retaliatory tariff duties, the EU would offer a zero-duty TRQ for high quality beef (HQB). Figure 2 illustrates the EU TRQ policy from 1997 to present.

U.S. Access to EU Tariff-Rate Quotas for Beef			
High-quality Beef Quota	TRQ (metric tons per year)		Tariff rate (Percent)
Initial Access	11,500	In Quota	20%
(1997-Present)		Above-Quota	12.80%
EU/U.S. MOU	20,000	In-Quota	0%
(2009-2012)		Above-Quota	12.80%
Current Access	48,200	In-Quota	0%
(2013-Present)		Above-Quota	12.80%

Source: United States Department of Agriculture; a report from the economic research service. Sanitary and Phytosanitary Measures and Tariff-Rate Quotas for U.S. Meat Exports to the European Union

Figure 2. EUs Trade Policy Regarding US Imports of NHTC Beef (Arita *et al*., 2014)

With the establishment of the MOU, in 2009 the TRQ limit was increased to 20,000 tonnes, which was the same year that the EU had placed the US into the shared TRQ HQB cap. Currently, the TRQ allocation is split among six different countries: Argentina (added in 2014), Australia (2010), Canada (2010), New Zealand (2011), the United States (2009), and Uruguay (2011).[7] As part of Phase II, in June 2012 the EU issued regulations increasing the HQB quota for grain-fed beef and changing the quota management system to a 'first come, first served' basis. Also, in October 2013 the EU expanded the TRQ cap from 45,000 to 48,200 tonnes, as well as the EU approved a two-year extension of the deal until August 2015.[8] Basically, the total amount that these six countries can import into the EU market at the In-Quota rate (0%) is a total combination of 48,200 tonnes. In 2015 the U.S. exported 28,450 tonnes of beef to the EU market and accounted for roughly 59.50% (2015) of the 48,200 tonne TRQ (ITC, 2015). This piece of data is important to note because it serves as a justification on part of the US in requesting an expansion for US beef exports into the EU as a minor provision to be included within the market access segment of the agreement.

4. Potential TTIP Trade Policy Measure - EU to US

With the TTIP negotiations well underway, there has been minimal reference on a market access proposal towards what the provision would include for future US beef exports into the EU. On a broad note, in economic negotiation, specifically relating to free trade and/or preferential trade agreements a primary concern includes the general notion of *trade liberalization*. Basically, parties engaged would like to increase investment opportunities, increased market access into the respective parties market and so on.[9] However, in reality, due to numerous complexities and differences of governments (e.g. domestic politics, geo-politics, cultural inconsistences), it is highly unlikely that the EU will completely lift the ban upon hormone treated beef. Take for instance, the situation on the beef market today is very different even if public opinion remains resolutely opposed to hormone use. Were the EU to even partially lift the ban on hormone-treated beef, the relevant constraint on US beef exports would no longer be the TRQ limit but the size of the out-of-quota tariff.[10]

One possible measure that is both reasonable and realistic from the perspective of the EU could include to offer the US a similar concession that was granted to Canada during the negotiations of the Canada-European Union: Comprehensive Economic and Trade Agreement (CETA); which (1) allotted an individual quota to Canadian beef exporters, and (2)

[6] For the purpose of this paper it is important to note that there is a clear price difference between HTS 0201 & HTS 0202 and the estimates for this project are based upon the combination of HTS codes constituting beef exports and imports.
[7] Ibid, TTIP and the Potential for US Beef Imports.
[8] Ibid, MOU, EU-US, WT/DS26/28.
[9] Trade Liberalization refers to a removal and/or reduction in restrictive trade barriers, including: tariffs, quotas, tariff-rate quotas, non-tariff barriers etc.
[10] Ibid, TTIP and the Potential for US Beef Imports

increased the TRQ cap to 50,000 tonnes (an increase of the total quota by 45, 838 tonnes from the already 4,162 tonne cap).[11] Put bluntly, it is unreasonable to assume that the EU would lift the ban due to conflicts that have protracted over two decades. However, there have been occurrences between the two countries on working out their differences in the attempts of maintaining an effective and co-operative relationship with respect to global governance and international trading relations.

5. TTIP Policy Measure (US TRQ Increase Mirroring that of CETA)

To begin, the European Union is a large consumer of beef. In 2015, EU total imports of beef equaled 2.4 million tonnes out of roughly 8.6 million tonnes traded throughout global markets (ITC, 2015). Whereas, in the same year the US exported a total 28,450 tonnes of NHTC beef to the EU. The EU accounted for 28% of total imports of beef traded in global markets, while the US's percent of market share of imported beef into the EU equals only 1.18% (ITC, 2015). So, if the US percent of market share into the EU market[12] is of such little value, does the potential of TTIP offer any means of relative gain(s) to US beef producers and cattle farmers?

With respect to a possible policy measure that pertains to market access, would include an increase of the TRQ cap for US high-quality (NHTC) beef imports into the EU. Essentially, the measure would (1) grant the US its own allotment in conjunction to a designated import amount allowed into the EU (*In-Quota*, *duty-free*), and (2) an increase in the TRQ cap on US beef imports into the EU from 28,450 tonnes to 50,000 tonnes.

As stated before, in 2015, the US exported 28,450 tonnes to the EU. Thus, following the same framework offered to Canada in CETA, the US TRQ would increase to 50,000 tonnes (a 21,550 tonne increase) and would be qualified as duty-free under the *In-Quota* margin of the EUs TRQ policy. Following this is an outline on the process on identifying the changes that would occur with a TRQ increase of 28,450 to 50,000 tonnes of U.S. beef imports. Figure 3 illustrates data that was gathered and manipulated to perform the economic analysis for the proposed measure.

EU - US: Beef Data and Numbers (2015)	
Total U.S. Beef Production (Tonnes)	11,900,000
EU Imports of U.S. Beef (Tonnes)	28,450
U.S. Total Beef Exports	719,591
(%) Share of U.S. Beef Exports to EU	3.954
U.S. Beef Exports (%) share of Total Beef production	23.91
EU Beef Imports World (Tonnes)	2,402,171
Beef Traded in Global Markets (0201 & 0202)	8,575,650
EU (%) Total Share of Global Beef Traded	28.01
U.S. (%) of EU Tariff-Rate Quota Share	59.02

Figure 3. EU – U.S. Beef Numbers (ITC, 2015)

6. Economic Analysis

This section will cover the economic analysis performed in determining and estimating the results of a tariff-rate quota cap increase granted to US HQB/NHTC beef exports.[13] Figure 4 illustrates the numbers used and calculated for the proposed TTIP policy measure.

There are multiple points illustrated in Figure 4 that need to be addressed and discussed. First, due to the increase in the TRQ cap size, the expansion in the EUs total beef imports would be very minor. However, a direct result from the change in quantity is that the EU market price (price per tonne of beef) dropped slightly, resulting in an increase in quota rents generated by the US. For instance, US quota rents pre TTIP equaled a value of 3,936 (per tonne), whereas with the implementation of TTIP US quota rents would slightly decrease to a value of 3,841. Even though the quota rents have decreased, due to the fact that the TRQ cap was increased by 21,550 tonnes, this increase of US beef exports offsets the reduction in quota rents generated illustrated by the value to US cattle farmers.

In addition, an important component of this policy measure also includes its effects upon US cattle farmers producing NHTC beef, as well as certain macro effects that would result from this measure. Figure 5 illustrates the implications of the policy measure upon US cattle farmers. Figure 6 illustrates the economic analysis in identifying the important changes to both the EU and world market.

[11] Ibid, TTIP and the Potential for US Beef Imports.
[12] In regards to beef exports constituting HTS 0201 & HTS 0202.
[13] TRQ cap increase to 50,000 tonnes (an increase of 21,550 tonnes).

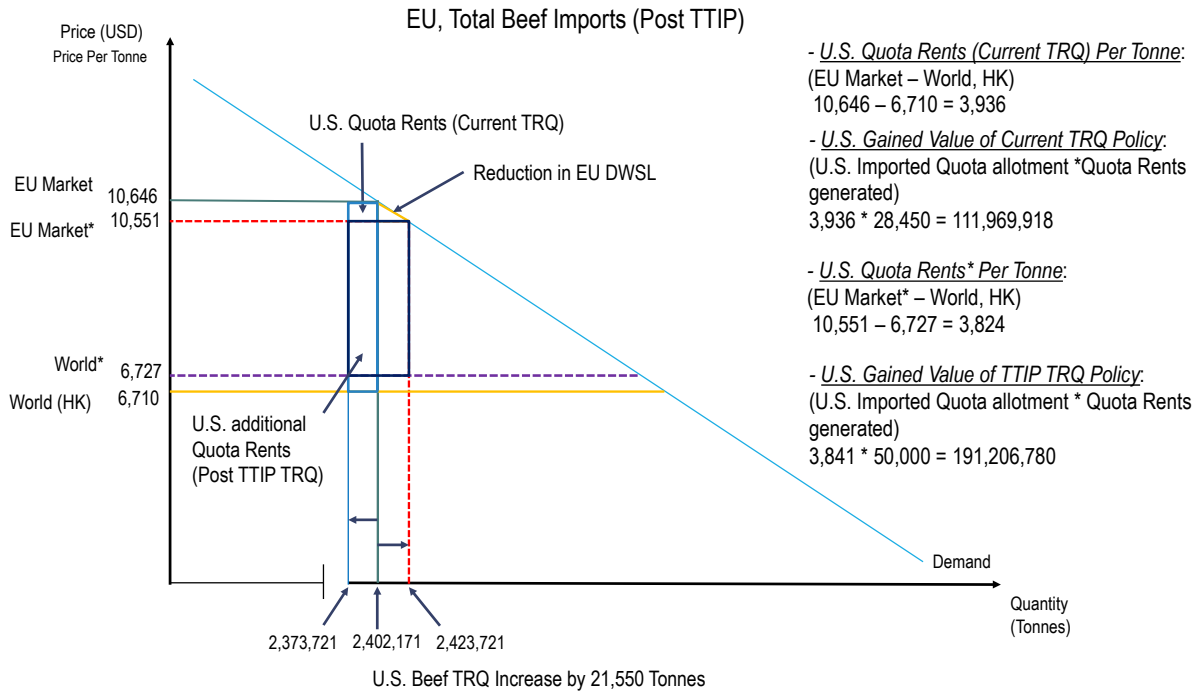


Figure 4. Partial Equilibrium Model for the Proposed TTIP Measure (ITC, 2015)

Value Gained for U.S. (Pre & Post TTIP)	
Pre TTIP	
U.S. Quota Rents (Per Tonne)	3,936
Value of Current Policy	111,969,918
Post TTIP	
U.S. Quota Rents (Per Tonne)	3,824
Value of TTIP Policy	191,206,780
Net Gain for U.S. from TTIP Policy	79,236,862
Net Gain for U.S. Cattle Farmers	200,911,074

Figure 5. Value to U.S. Cattle Farmers (Pre & Post TTIP)

TTIP Implementation		
Partial Equilibrium (U.S. TRQ Cap Increase 28,450 to 50,000)		
Price Elasticity of Demand	-1	
EU Price Old (Price Per Tonne)	10,646	
EU Price New	10,551	
Price World (Price Per Tonne, Hong Kong)	6,710	
Price World New	6,727	
Q Demanded Old	2,402,171	
Q Demanded New	2,423,721	
% Δ Q Demanded	0.0089	0.8931
% Δ Price	-0.0089	-0.8931
Macro Effects		
% Δ World Price	0.0025	0.2513

Figure 6. Partial Equilibrium Analysis with respect to the EU and World Market

The important changes to identify with the above information includes the EU beef price (price per tonne) changed by less than 1%, dropping the EU price from 10,646 to 10,551. As well as, the new quantity demanded changed very slightly with respect to the additional TRQ increase granted to the US (being an additional 21,550 added to the already existing 28,450 totaling 50,000 tonnes). Another important parameter that needs to be addressed is the price elasticity of demand (PED) and why it was used throughout the analysis. For instance, the PED is negative (-1), which essentially means that the demand for this particular product (HTS 0201 & HTS 0202 of beef) is not highly sensitive to price.

Turning to the macro effects of this measure, the important parameter to identify is the percent change to the world price of beef with respect to the TTIP policy implementation. Due to the EU market price for US beef decreased slightly this will cause an increase in the world market price for beef in general. What is significant about this change can be viewed in the net increase that US cattle farmers experience when exporting beef into world markets (including the EU market).

7. Conclusions

The TTIP agreement serves a much larger purpose than just an FTA offering enhanced market preferences in regards to the two economies. The very nature of this agreement includes two of the worlds most advanced and integrated economies coming together to strengthen co-operation and collaboration in bolstering global governance and the established international trade regime. Even though the US and EU are often conflicted on issues relating to commerce and trade, both parties have demonstrated a genuine need in further fostering co-operation in trans-Atlantic relations.

With respect to US beef exports into the EU market, TTIP offers the potential for US cattle farmers to experience a positive net gain, as well as would grant increased access into a market that has an appreciation and clear enjoyment of beef. This paper attempts to illustrate a realistic approach on utilizing qualitative and quantitative analysis for a potential TTIP measure directly aimed at NHTC beef. All in all, with the implementation of this policy being a market access provision within TTIP the US would experience a net gain of $280 Million.[14]

The basis for the economic analysis[15] used in this paper represents the partial equilibrium model. Moreover, illustrating price changes and demand changes of the proposed policy. Many assumptions were made with respect in designing the qualitative and quantitative component of this project. First, the framework for the policy measure mirrors that of what was negotiated in CETA between Canada and the European Union, thus representing a realistic and reasonable option that could be exercised in the TTIP negotiations. Second, the EU is a large importer of beef totaling roughly 28% of all global beef traded; therefore an increase in the TRQ cap should lower the EU market price for beef. With respect to the above statement, with the implementation of this TTIP measure the EU's total share of imported globally traded beef would increase slightly to 28.26%, which is very little to no difference at all. Third, due to the fact that EU imports of US beef is represented by a quota system, quota rents (quota rents per tonne) generated (post the TTIP policy implementation) should slightly decrease with respect to a drop in the EU market price of beef.

In conclusion, this paper presents a hypothetical policy option expressed towards US exports of NHTC beef to the EU in regards to the TTIP negotiation. There were many assumptions that went into the analysis of this project, making its accuracy and efficiency questionable. Therefore, further analysis is warranted. First, for example, sensitivity analysis could be presented in providing multiple options with respect to the price elasticity of the HTS 0201 & 0202 product. Second, the assumption that HTS 0201 & 0202 constitute perfect substitutes may be challenged and questioned, which would result in a different model in performing the economic analysis. All in all, the research and analysis in this paper identifies a realistic and reasonable policy option that could be expressed from the EU to the US in the attempts of building effective and long-lasting economic and strategic co-operation.

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[14] Net gain from the TTIP proposal equals roughly $79 million and the net gain for U.S. cattle farmers equals roughly $201 million.

[15] This paper utilized the Partial Equilibrium (PE) model as the primary basis due to the fact that *beef* within the parameters of this research are considered to be perfect substitutes (both U.S. beef and world beef).

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