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ANALYSIS OF IMPLEMENTING VAT AND IMPORT DUTIES ON THE INDONESIA-JAPAN PREMIUM BEEF TRADE UNDER THE IJEPA-FTA SCHEME: A CGE-GTAP APPROACH

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Abstract
The implementation of import policy raises critical questions related to fiscal and economic aspects, especially regarding the impact of imposing import VAT without exemption facilities and import duties on premium beef imports for the Indonesian economy. This study investigates the effects of taxation tariffs on premium beef from Japan. This research is a quantitative study using a disaggregated Computable General Equilibrium Global Trade Analysis Project (CGE-GTAP) analysis. It focuses on the impact of predictor simulations on economic variables consisting of GDP, exports, imports, trade balance, equivalent variation, domestic production and demand, and prices. The study compares scenarios when VAT is imposed, when import duty preference under IJEPA is applied, and when VAT is imposed and import duty rates are increased to protect domestic producers. The results of this study show that the impact of the IJEPA agreement between Indonesia and Japan, especially regarding the import of premium beef, benefits both parties, even though the tariff regulated in IJEPA for premium beef is the same as the MFN tariff. There was an increase in GDP, imports, trade balance, domestic production and demand, and prices, but exports and welfare declined. Both simulations showed similar results, but the increase in import duties demonstrated a greater magnitude. This means that producers experience a greater positive impact, but consumers suffer greater losses as well. This study demonstrates that the imposition of VAT accompanied by import duty rates in IJEPA can have a positive effect on the national economy. It is recommended to continue this policy.
Keywords: CGE-GTAP, Economic impact, IJEPA, Import duty, Premium beef

INTRODUCTION

The prosperity and health of a nation are often reflected in the nutritional quality of its people. Indicators such as low malnutrition rates, minimal stunting cases, and the fulfillment of nutritional intake in daily meals are important benchmarks in assessing the welfare of a country. Indonesia, as the country with the fourth largest population in the world, faces major challenges in meeting the nutritional needs of all its population, especially in terms of providing quality animal proteins such as beef. The sources of protein in Indonesia are include broiler, lamb/goat, and beef livestock (Priyono & Priyanti, 2018). Of all these types of meat, based on research conducted by (Prakoso et al., 2022), beef is the type most enjoyed by the people of Indonesia.

Given the limitations of domestic production, beef imports are one of the strategic solutions to meet the animal protein needs of the people of Indonesia. The country relies heavily on imports to meet its meat needs, with most of the raw materials for the dairy industry and the leather processing industry being imported (Sterzer & Azizah, 2021). This paper focuses on premium beef meat, for example Wagyu beef, which is characterized by extensive marbling—fine streaks of intramuscular fat dispersed throughout the meat. This fat melts at a lower temperature, resulting in a buttery texture and unparalleled tenderness. In contrast to traditional beef, which often lacks this level of intricate marbling, it affects both texture and flavor.

The quality of local cattle and buffalo meat is lower compared to imported meat, associated with factors such as breed selection, feed quality, and handling during the slaughter process (Subandi & Sari Aryani, 2019). Efforts to improve livestock management, selection of calves, and crossing with Taurus Boss calves are being carried out to improve meat quality (Nuraini et al., 2019). The purpose of providing facilities for basic needs is basically fair economic development (Wijaya & Arsini, 2021). VAT exemption for basic necessities supports the convenience of people to get nutritional adequacy for all Indonesia people (Mukarromah,

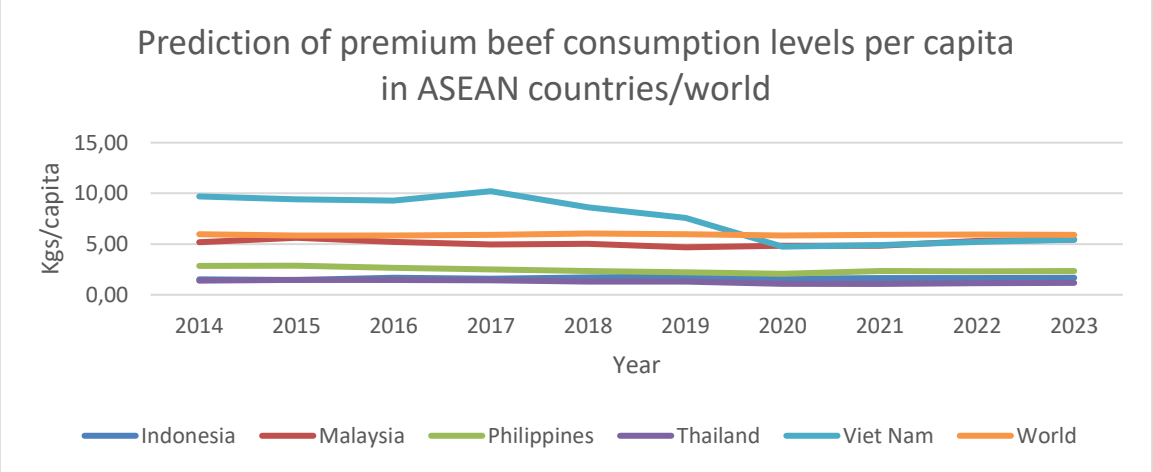
2018). People who get adequate nutrition will be able to avoid various diseases, for example with adequate nutrition pregnant women will be able to save their children from the danger of stunting (Anindita et al., 2012) (WHO, 2018). One of the indicators that can be used to measure the nutritional adequacy of the people of Indonesia is to meet the protein needs of the community Nuryati & Farid (2016)(Anindita et al., 2012).

Government Regulation of the Republic of Indonesia Number 49 of 2022 concerning Exempted Value Added Tax and Value Added Tax or Value Added Tax and Sales Tax on Luxury Goods Not Collected on the Import and/or Delivery of Certain Taxable Goods and/or Delivery of Certain Taxable Services and/or Utilization of Certain Taxable Services from Outside the Customs Area (Nuryati & Farid (2016)(Haq, 2022). Initially, basic necessities were categorized as a negative list of VAT, or those that were exempted from being tax objects (Nuryati & Farid, 2016.). However, with the issuance of the Law on Harmonization of Tax Regulations, the status of basic necessities, which are categorized as negative lists, has been changed to tax objects that receive VAT exemption facilities (Pratiwi et al, 2021.). The types of goods that are categorized as basic necessities include meat, eggs, milk, fruits, and vegetables (Amin Gultom et al., 2022.).

The FTA between Indonesia and Japan, known as the IJEPA (Indonesia-Japan Economic Partnership Agreement), offers significant benefits for both nations, particularly in the trade of premium beef. Under this agreement, Indonesia enjoys reduced or eliminated tariffs on imported Japanese premium beef, which helps meet the growing demand for high-quality meat among Indonesian consumers. On the other hand, Japan gains access to a larger market in Indonesia, increasing its export volume and supporting its agricultural sector. This mutually beneficial trade relationship showcases how both nations can capitalize on their comparative advantages. Moreover, while the IJEPA is an FTA, which aims to eliminate tariffs and trade barriers comprehensively, it can also be seen as a form of a PTA. An FTA is essentially a broader type of PTA, as it includes preferential treatment like reduced tariffs but goes further by aiming for complete tariff elimination across most goods and services. In the case of IJEPA, the preferential treatment in premium beef trade exemplifies how the agreement not only reduces barriers but also strengthens economic ties through specialized market access, leading to enhanced trade and economic growth for both Indonesia and Japan.

Predictive data on Indonesia's meat consumption level compared to other countries in ASEAN and the world released by the Organisation for Economic Co-operation and Development (OECD) from 2014-2023 estimates that the meat consumption of Indonesia people will reach 1,167 kg per capita in 2023, which is still lower than other ASEAN countries such as Thailand, Malaysia, Vietnam and even the Philippines as depicted in figure 1 below:

Figure 1



Source: OECD, 2023

According to (Prakoso et al., 2022), data from Central Agency of Statistic (BPS, 2023b) shows that the realization of Indonesia's beef consumption level has a relatively low average consumption when compared to other types of meat.

Table 1 Average Consumption Per Week (kg per capita) Indonesia Type of Meat	**2017**	**2018**	**2019**	**2020**	**2021**
Beef	0,037	0,038	0,04	0,039	0,038
Purebred / Village Chicken Meat	0,53	0,516	0,532	0,557	0,538
Fresh Fish and Shrimp	1,399	1,39	1,44	1,428	1,514

Source: (BPS, 2023b)

On the other hand, the implementation of this import policy raises a number of critical questions related to fiscal and economic aspects. One of the main issues that needs to be studied is the imposition of Value Added Tax (VAT) or import duties on imported beef. Excessive tax exemptions can also have a negative impact by shrinking the tax base and reducing state revenues from the tax sector (Keen & Lockwood, 2010). Extensive tax exemptions can reduce the number of taxable transactions, thereby reducing total tax revenue. Therefore, tax exemption schemes need to be carefully and carefully designed so as not to be excessive. Tax exemption needs to consider various factors such as economic and social objectives, principles of fairness, and the administrative capacity of the tax authorities (Ebrill et al., 2001). With comprehensive considerations, it is hoped that the tax exemption scheme can be optimal in supporting economic and social policies without significantly sacrificing state revenue.

Proper policy formulation in this regard is crucial, given its significant impact on the final price of products and public accessibility to quality protein sources. In order to reduce the tax burden felt by the community, the government provides various tax facilities, especially in VAT (Mukarromah, 2018). The provision of VAT exemption can provide great benefits, including VAT exemption for basic needs such as food, medicine, and education can reduce costs and increase affordability for low-income groups. This supports fair economic development. Furthermore, strategic VAT exemptions can encourage certain activities such as research and development, exports, eco-friendly products, and others that can ultimately help achieve economic and social goals

In the bilateral trade agreement scheme between Indonesia and Japan, namely the Indonesia-Japan Economic Partnership Agreement (IJEPA), it offers a potential cooperation framework between the two countries to optimize beef imports. IJEPA not only opens up opportunities for Indonesia to access a supply of quality beef from Japan, but also creates complex economic dynamics that need to be thoroughly evaluated.

This study aims to analyze the impact of beef import policies within the framework of IJEPA on the well-being of both countries, with a particular focus on its fiscal and economic implications for Indonesia. Using the Computable General Equilibrium (CGE) approach and the Global Trade Analysis Project (GTAP) database, the study will simulate various import policy scenarios, including variations in the imposition of VAT and import duties, to evaluate their impact on macroeconomics, income distribution, and other welfare indicators.

The results of this analysis are expected to provide in-depth and evidence-based insights to support optimal policy formulation. Thus, this research not only contributes to academic discourse on international trade and fiscal policy, but also provides practical recommendations for policymakers in an effort to improve food security and the welfare of the people of Indonesia.

LITERATURE REVIEW

Bagwell & Staiger, (1999) emphasize that terms-of-trade considerations can provide an additional incentive for countries to lower their Most Favored Nation (MFN) tariffs after joining a Preferential Trade Agreement (PTA). Specifically, PTA members import less from non-member countries, which reduces their incentive to charge high tariffs in order to manipulate the terms of trade in their favor. Going even further, Bond et al. (2004) establish that the drop in the optimal external tariff of PTA members is significant enough to also improve the terms of trade for non-member countries.

According to Kuenzel & Sharma (2021), Freund and Ornelas (2010) discuss how political economy forces can further strengthen the incentive for FTA members to lower their external MFN tariffs. For instance, in the protection-for-sale model of Grossman and Helpman (1994), a PTA will weaken the influence of domestic producers seeking protection, as their market share decreases, which increases the prospect of lower tariffs being applied to non-member countries. The idea that trade diversion can serve as a motivation for countries to reduce their Most Favored Nation (MFN) tariffs has been emphasized by numerous contributions in the academic literature. Some of the key works that have highlighted this concept include Viner (1950), Krugman (1991), Richardson (1993, 1995), Ornelas (2005), and Estevadeordal et al. (2008). The fundamental mechanism in the model that causes the inverse relationship between the import share from FTA (Free Trade Agreement) partners and the optimal Most Favored Nation (MFN) tariff is due to the trade diversion effect created by the FTA.

Deardorff & Sharma (2020) found that developed countries tend to exempt sectors with higher degrees of trade creation from their Preferential Trade Agreement (PTA) concessions, whereas developing countries exempt sectors with more trade diversion. This observed pattern is consistent with developed countries being primarily motivated by protecting their domestic import-competing industries - which are hurt by trade creation - when choosing which sectors to exempt from PTA concessions. In contrast, developing countries are more concerned about the loss of tariff revenues due to the trade diversion effects of PTAs. According to (Kavalski, 2016), the imposition of tariffs aims to protect domestic industry, increase government income, correct the impact of trade imbalances, and overcome trade distortions Riesfandiari et al. (2021)

According to Kuenzel & Sharma (2021), Grossman and Helpman (1995) and Krishna (1998) show that when producer-driven special interest groups have more influence, governments are more likely to implement PTAs which enhance tariff protection towards outside countries. Freund and Ornelas (2010) also provide a detailed analysis of this point. (Stoyanov, 2009) argues that the presence of foreign lobbying can lead to higher external tariffs as well in the context of a PTA due to their interest in preserving and expanding the preferential market access of PTA partners.

According to Mankiw (2016), general equilibrium is a model capable of elucidating the production, distribution, and allocation of economic output for both goods and services.. This allows for detailed estimates of how policy changes (shocks) impact the economic supply chain, including both net and gross prices, as well as quantities across various industrial sectors. (Dixon & Rimmer, 2009) notes that CGE-based analyses have proven valuable in identifying indirect effects.

(Corong et al., 2017) describe the Global Trade Analysis Project (GTAP) model as a global application of the CGE model. It is characterized as a comparative static model that can be employed for both entry-level usage and complex global analyses.

METHODS

This research will be carried out with a descriptive quantitative method through simulation. Descriptive quantitative research with an input-output approach is a type of research that aims to describe or describe the characteristics of research variables in the form of quantitative data (numbers) and analyze the relationship between input and output between these variables (Sugiyono, 2017).

In this research, the quantitative data application used the CGE-GTAP method. The CGE-GTAP method used is GTAP database 10A and RunGTAP v3.75 which uses the GTAP version 7 model. The GTAP database is obtained from country input-output tables that use other international datasets (Aguiar et al., 2019).

The baseline shock is GDP, population, labor, capital and land, while the simulation shock uses the VAT rate alone via the tms variable to be 19.75% and the VAT rate and *i*mport duties via the tms variable to be 24.85%.

RESULTS AND DISCUSSION

This study uses CGE-GTAP analysis with the details of the simulation carried out, the first alternative is the addition of VAT (eliminating from exemption), while the second alternative is the addition of VAT and the increase in MFN import duties, so that what is shocked in this study is the tariff policy of increasing/decreasing VAT rates and/or import duties on imported premium beef.

Gross Domestic Product

Table I.1 shows the results of simulations on the imposition of VAT in the context of imports and an increase in import duty rates on premium meat. Positive changes in GDP only occurred in Indonesia, while other regions experienced negative changes. This condition applies both if there is only a shock to VAT and a shock to import duties and VAT, with a greater change in the condition of shock to import duties and VAT.

Table Error! No text of specified style in document.**.1. Change in Gross Domestic Product per Region (in Percent)**

Region	Change		Conclusion A vs B
	Shock PPN (A)	Shock Import Duty and VAT (B)	
Indonesian	0,013532	0,013533	B goes up bigger
Japan	(0,000065)	(0,000065)	A and B are the same
RestofWorld	(0,000177)	(0,000177)	A and B are the same

Source: processed by the author from GTAP Database 10 with RunGTAP v3.75

Details of each change in the components that make up GDP by type of expenditure can be found in Tables I.2 and I.3. Government consumption, investment, and expenditure represent transactions in the country. In terms of consumption, Indonesia experienced positive changes for both simulations, while other regions experienced negative changes. The positive change in consumption in Indonesia is greater if the shock is given to import duties and VAT, although the difference is small.

In terms of investment, in both simulations, Indonesia experienced positive changes, while Rest of World experienced negative changes. However, for Japan, in the simulated condition only given on VAT, there is no change in investment, but there is a positive change when given on import duties and VAT.

In terms of government spending, Indonesia experienced positive changes, while Japan and RestofWorld experienced negative changes. The amount of change is also not different between the two simulations or indeed the value is very small.

In terms of international trade, there are exports and imports as components that make up GDP. Exports and imports will be discussed in the next subchapter.

Table I.2. Changes in the Components Constituting GDP in terms of VAT Shock Expenditure (in Percent)

Region	Consumption	Investment	Government Expenditure	Export	Impose
Indonesian	0,000161353	0,000034260	0,000112503	(0,000462758)	(0,000499515)
Japan	(0,000000455)	-	0,000000671)	(0,000001923)	(0,000001791)
RestofWorld	(0,000001855)	(0,000000529)	(0,000001797)	(0,000002601)	(0,000001779)

Source: processed by the author from GTAP Database 10 with RunGTAP v3.75

Table I.3. Changes in the Components Constituting GDP in terms of Import Duty and VAT Shock Expenditure (in Percent)

Region	Consumption	Investment	Government Expenditure	Export	Impose
Indonesian	0,000161491	0,000034260	0,000112503	(0,000462365)	(0,000499515)
Japan	(0,000000455)	0,000000149	0,000000671)	(0,000002030)	(0,000001791)
RestofWorld	(0,000001855)	(0,000000529)	(0,000001797)	(0,000002601)	(0,000001779)

Source: processed by the author from GTAP Database 10 with RunGTAP v3.75

Export

The impact of the imposition of VAT in the context of imports and the increase in import duty rates on premium meat on total exports are presented in Table I.4 and Table I.5.

Table Error! No text of specified style in document.**.4. Change in Export Value per Region (in Percent)**

Sector	**Shock PPN**			**Import Duty and VAT Shock**		
	Indonesian	Japan	RestofWorld	Indonesian	Japan	RestofWorld
Meat	(2,783946)	0,042005)	(0,261097)	(2,784072)	(0,061592)	(0,261083)
OtherMeat	(0,119588)	0,001590)	(0,000259)	(0,119593)	(0,001584)	(0,000259)
OtherLivesck	(0,330087)	0,000955	0,002384	(0,330101)	0,000961	0,002384
LiveAnml	(2,228635)	0,021601)	0,036754	(2,228738)	(0,021558)	0,036756
Fish	0,008451	0,000520)	(0,000617)	0,008451	(0,000519)	(0,000617)
OtherfasPPN	(0,263912)	0,001935	0,004208	(0,263924)	0,001945	0,004209
ProcessFood	(0,072443)	0,002796	0,003151	(0,072446)	0,002797	0,003152
OtherIndustr	(0,036229)	0,000219)	0,000379	(0,036231)	(0,000218)	0,000379
Services	(0,028702)	0,000120)	0,000050	(0,028703)	(0,000119)	0,000050

Source: processed by the author from GTAP Database 10 with RunGTAP v3.75

Table Error! No text of specified style in document.**.5. Change in Export Quantity per Region (in Percent)**

Sector	**Shock PPN**			**Import Duty and VAT Shock**		
	Indonesian	Japan	RestofWorld	Indonesian	Japan	RestofWorld
Meat	(3,192284)	0,041903)	(0,260124)	(3,192427)	(0,061483)	(0,260110)
OtherMeat	(0,135175)	0,001546)	(0,000004)	(0,135180)	(0,001539)	(0,000004)
OtherLivesck	(0,392535)	0,000982	0,002683	(0,392552)	0,000989	0,002683
LiveAnml	(2,974981)	0,021560)	0,039082	(2,975118)	(0,021503)	0,039083
Fish	0,016083	0,000345)	(0,000456)	0,016083	(0,000342)	(0,000456)
OtherfasPPN	(0,335278)	0,001875	0,004518	(0,335293)	0,001888	0,004518
ProcessFood	(0,094011)	0,002795	0,003264	(0,094015)	0,002798	0,003264

OtherIndustr	(0,041810)	(0,000181)	0,000513	(0,041812)	(0,000179)	0,000513
Services	(0,038831)	(0,000056)	0,000203	(0,038832)	(0,000055)	0,000203

Source: processed by the author from GTAP Database 10 with RunGTAP v3.75

It can be seen that in Indonesia, in both simulations, there was a decrease in export quantity for every sector except the Fish sector. The decline in exports in sectors other than the Fish sector was supported by a decrease in production or an increase in domestic consumption (discussed in the future study). The Meat sector as given the focus of this article has experienced a decline in exports even though domestic production has increased, because the excess production is allocated to domestic demand which is also increasing, so that fewer excess products can be exported.

From the conditions of the two simulations, a greater decline in exports occurred in the simulation of an increase in import duty rates and an increase in VAT rates. When meat imports become more expensive, indirectly other sectors experience a greater increase in demand. If it is not accompanied by an increase in production, then it is natural that when demand increases but production is stagnant, then products that can be exported because of excess, will now be optimized for domestic consumption.

Impose

The impact of the imposition of VAT in the context of imports and the increase in import duty rates on premium meat on imports per region can be seen in Table I.6. and Table I.7.

Table Error! No text of specified style in document.**.6. Change in Import Value per Region (in Percent)**

Sector	**Shock PPN**			**Import Duty and VAT Shock**		
	Indonesian	Japan	RestofWorld	Indonesian	Japan	RestofWorld
Meat	(35,205044)	0,000796	(0,003554)	(35,206482)	0,000781	(0,003554)
OtherMeat	0,065710	0,000212	(0,000428)	0,065713	0,000210	(0,000428)
OtherLivesck	0,168798	0,000179	(0,000951)	0,168806	0,000174	(0,000951)
LiveAnml	1,226361	(0,000334)	(0,016439)	1,226417	(0,000647)	(0,016438)
Fish	(0,013267)	0,000025	(0,000294)	(0,013268)	0,000023	(0,000294)
OtherfasPPN	0,125863	(0,000663)	(0,001187)	0,125868	(0,000671)	(0,001187)
ProcessFood	0,038244	(0,000591)	(0,000770)	0,038245	(0,000594)	(0,000770)
OtherIndustr	0,005783	(0,000183)	(0,000093)	0,005783	(0,000183)	(0,000093)
Services	0,013259	(0,000024)	(0,000178)	0,013260	(0,000024)	(0,000178)

Source: processed by the author from GTAP Database 10 with RunGTAP v3.75

Table Error! No text of specified style in document.**.7. Change in Import Quantity per Region (in Percent)**

Sector	**Shock PPN**			**Import Duty and VAT Shock**		
	Indonesian	Japan	RestofWorld	Indonesian	Japan	RestofWorld
Meat	(35,204430)	0,001718	(0,002678)	(35,205860)	0,001703	(0,002678)
OtherMeat	0,065962	0,000462	(0,000188)	0,065965	0,000460	(0,000188)
OtherLivesck	0,169089	0,000397	(0,000914)	0,169097	0,000392	(0,000914)
LiveAnml	1,227639	0,001640	(0,014667)	1,227696	0,001326	(0,014666)
Fish	(0,013109)	0,000907	0,000023	(0,013110)	0,000905	0,000023
OtherfasPPN	0,126158	(0,001294)	(0,001684)	0,126163	(0,001302)	(0,001684)
ProcessFood	0,038357	(0,001175)	(0,001601)	0,038359	(0,001178)	(0,001601)
OtherIndustr	0,005910	(0,000245)	(0,000014)	0,005911	(0,000245)	(0,000014)
Services	0,013411	0,000093	(0,000074)	0,013411	0,000092	(0,000074)

Source: processed by the author from GTAP Database 10 with RunGTAP v3.75

The condition of imports in Indonesia is very opposite to the change in production which will be explained later. In both simulations, there was a decrease in meat imports due to the price becoming more expensive than in the country. When imports decrease, it will be accompanied by an increase in production. However, it can be seen that other sectors have experienced an increase in imports due to stagnant production and increased demand, so they must be fulfilled via imports. The thing that is an anomaly is the Fish sector. When production decreases, it is natural to meet needs through imports, but because domestic demand declines deeper, it is natural that imports also decrease.

Reflecting on export conditions, from both simulations, a larger movement of imports occurred in the increase in import duty and VAT rates. Stagnant production is accompanied by an increase in domestic demand, if it cannot be met from that production, it will be met by imports. For the Meat sector, the decrease in imports is also greater because the tariffs that apply at the time of import are also larger, resulting in the price of imported goods being more expensive than domestic.

Trade Balance

Table I.8 shows changes in the trade balance per region due to the imposition of VAT in the context of imports and an increase in import duty rates on premium meat.

Table I.8. Trade Balance Change per Region (in Million USD)

Region	Change		Conclusion A vs B
	Shock PPN (A)	**Shock Import Duty and VAT (B)**	
Indonesian	23,011896	23,012691	B goes up bigger
Japan	(0,478793)	(0,476977)	B drops smaller
RestofWorld	(22,533133)	(22,535749)	B drops bigger

Source: processed by the author from GTAP Database 10 with RunGTAP v3.75

In both simulations, Indonesia experienced positive changes while Japan and RestofWorld experienced negative changes. Indonesia experienced a greater positive change if the shock imposed on import duties and VAT was attributed to a greater decrease in imports in these conditions.

When viewed per sector, the Meat and Fish sector experienced greater growth in terms of being given a shock to import duties and VAT. This is also due to a higher decrease in imports when the tariff is higher due to increased import duties and VAT imposed. For other sectors, the shock to import duties and VAT caused a greater decline in the trade balance as these sectors became the substitution option for premium meat imports. The higher the tariff, the greater the impulse to import from other sectors, for example other types of meat or even import live animals.

Table I.9. Change in Trade Balance per Sector in Indonesia (in Million USD)

Sector	Change		Simulation A vs B
	Shock PPN (A)	**Shock Import Duty and VAT (B)**	
Meat	194,686005	194,693939	B goes up bigger
OtherMeat	(0,130209)	(0,130214)	B drops bigger
OtherLivesck	(5,651989)	(5,652244)	B drops bigger
LiveAnml	(18,376818)	(18,377666)	B drops bigger
Fish	0,125416	0,125420	B goes up bigger
OtherfasPPN	(25,139437)	(25,140593)	B drops bigger
ProcessFood	(29,962641)	(29,963942)	B drops bigger
OtherIndustr	(82,601501)	(82,604683)	B drops bigger

Services	(9,936930)	(9,937318)	B drops bigger

Source: processed by the author from GTAP Database 10 with RunGTAP v3.75

Changes in the trade balance due to simulations carried out as shown in Table I.9. is a reflection of imports and exports. The high decline in imports and the not too high decline in exports in the Meat sector caused the trade balance to be positive. For the Fish sector, the decline in imports accompanied by an increase in exports caused the trade balance to grow. Meanwhile, in other sectors, an increase in imports accompanied by a decrease in exports caused a negative change in the trade balance.

Domestic Production and Demand

Table I.10. and Table I.11. shows a comparison between output and total demand after the imposition of VAT in the context of imports and an increase in import duty rates on premium meat.

Table I.10. Comparison of Output Quantity and Total Demand for Domestic Goods after VAT Shock Simulation (in Units)

Sector	Pre			Post		
	Output	Total Demand	Excess Supply	Output	Total Demand	Excess Supply
Meat	5.813,718262	5.800,038630	13,679632	6.041,809082	6.028,570285	13,238797
OtherMeat	8.660,389648	8.584,329579	76,060069	8.659,858398	8.583,900869	75,957529
OtherLivesck	17.704,302734	16.994,679442	709,623292	17.696,621094	16.989,732251	706,888843
LiveAnml	4.215,101563	3.850,280467	364,821096	4.303,860352	3.942,652492	361,207860
Fish	24.049,109375	22.930,739014	1.118,370361	24.047,962891	22.929,412418	1.118,550473
OtherfasPPN	82.954,796875	77.619,526756	5.335,270119	82.915,468750	77.598,049840	5.317,418910
ProcessFood	154.061,000000	118.244,997011	35.816,002989	154.013,953125	118.231,622606	35.782,330519
OtherIndustr	1.188.478,250000	649.099,059903	539.379,190097	1.188.285,375000	649.002,377934	539.282,997066
Services	886.135,000000	850.724,544586	35.410,455414	886.126,375000	850.724,005097	35.402,369903

Source: processed by the author from GTAP Database 10 with RunGTAP v3.75

Table I.11. Comparison of Output Quantity and Total Demand for Domestic Goods after Shock Simulation of Import Duty and VAT (in Units)

Sector	Pre			Post		
	Output	Total Demand	Excess Supply	Output	Total Demand	Excess Supply
Meat	5.813,718262	5.800,038630	13,679632	6.041,819336	6.028,580705	13,238631
OtherMeat	8.660,389648	8.584,329579	76,060069	8.659,858398	8.583,900869	75,957529
OtherLivesck	17.704,302734	16.994,679442	709,623292	17.696,621094	16.989,731223	706,889871
LiveAnml	4.215,101563	3.850,280467	364,821096	4.303,864258	3.942,656757	361,207501
Fish	24.049,109375	22.930,739014	1.118,370361	24.047,962891	22.929,412421	1.118,550470
OtherfasPPN	82.954,796875	77.619,526756	5.335,270119	82.915,460938	77.598,049170	5.317,411768
ProcessFood	154.061,000000	118.244,997011	35.816,002989	154.013,953125	118.231,623011	35.782,330114
OtherIndustr	1.188.478,250000	649.099,059903	539.379,190097	1.188.285,375000	649.002,377907	539.282,997093
Services	886.135,000000	850.724,544586	35.410,455414	886.126,375000	850.724,006867	35.402,368133

Source: processed by the author from GTAP Database 10 with RunGTAP v3.75

From both simulations, it can be seen that the total output for the Meat and LiveAnml sectors has increased, with other sectors experiencing a decrease in output. This increase in

output was also due to the same movement in total demand, with Meat and LiveAnml improving. However, in aggregate as shown through excess supply, it can be seen that the only sector that experienced an increase was the Fish sector, due to a decrease in output that was smaller than the total demand. This increase in excess supply again reflects the condition of the fish sector which has experienced an increase in exports due to excess domestic production and a decrease in imports due to the use of more massive domestic products.

For the Meat and LiveAnml sectors where output and total demand increased, the amount of excess supply decreased. This is because the increase in total demand is greater than the increase in output. Other sectors also experienced a decrease in excess supply due to a decrease in output greater than the total demand. In sectors that experienced a decrease in excess supply, a decrease in exports was reflected due to the majority of goods produced only sufficient to meet some domestic needs and an increase in imports to cover the difference from the decline in domestic production/decrease in output.

Although the positive and negative movements of the two simulations are the same, in magnitude, there is a difference between the two even though the magnitude is not significant. In the Meat and LiveAnml sectors, there was an increase in output and greater total demand. This shows that with higher tax rates in the context of imports, the domestic Meat and LiveAnml sectors are more alive both in terms of production and demand for domestic products. Not only from the Meat sector which was directly given a shock¸ but also LiveAnml which is a direct input from the Meat sector also increased, which means that the upstream sector also experienced an increase in productivity. The interesting thing is that the output of other sectors in both simulations has decreased, but the indigo is the same if the two simulations are compared. This means that the linkage between the Meat sector and other sectors other than LiveAnml in terms of production is not sensitive to changes in Meat import prices.

Equivalent Variation

The impact of the imposition of VAT in the context of imports and the increase in import duty rates on premium meat on the welfare (equivalent variation) per region in the simulation is shown in Table I.12.

Table I.12. Change Equivalent Variation per Region (in Million USD)

Region	**Shock PPN**				**Import Duty and VAT Shock**			
	Allocative Efficiency	Terms of Trade	IS Effect	Total Change	Allocative Efficiency	Terms of Trade	IS Effect	Total Change
Indonesian	(43,020450)	25,077290	1,540715	(16,402440)	(43,023450)	25,078370	1,540766	(16,404320)
Japan	0,111754	(0,737754)	(0,047782)	(0,673782)	0,113291	(0,740557)	(0,047400)	(0,674666)
RestofWorld	(3,652810)	(24,341160)	(1,493035)	(29,487000)	(3,652984)	(24,339430)	(1,493470)	(29,485880)

Source: processed by the author from GTAP Database 10 with RunGTAP v3.75

In both simulations, the same direction of movement was seen, with different magnitudes but not too significant differences. In total, all regions experienced negative changes, with Japan being the region with the smallest decline. The components that make up equivalent variation consist of allocative efficiency, terms of trade, and the effects of changes in investment and saving (IS).

In terms of allocative efficiency, it can be seen that Indonesia has experienced negative changes due to a cumulative decrease in consumption both from within the country and imports. The decrease in consumption is due to increased prices so that consumer marginal utility is not achieved efficiently. In addition, commodity prices in other sectors also increased, reducing domestic demand and consumption. The allocative efficiency component in Indonesia has increased only in terms of production, which shows an improvement in domestic production.

Although in terms of allocative efficiency has decreased, in terms of trade and IS effect has increased. This shows that commodity prices from Indonesia are more competitive than

commodities from other countries in terms of price (trade effect) and the cost of investment in Indonesia is lower than the cost of saving money (IS effect).

Price

Table I.13 shows the change in the export price index compared to the price index in Indonesia from the simulations conducted.

Table Error! No text of specified style in document..**13. Changes in the Export Price Index and Price Index in Indonesia (in Percent)**

Sectors	**Shock PPN**		**Import Duty and VAT Shock**	
	Changes in the Export Price Index	Price Index Changes	Changes in the Export Price Index	Price Index Changes
Meat	(0,000897)	0,421803	(0,000897)	0,421822
OtherMeat	(0,000244)	0,015608	(0,000244)	0,015608
OtherLivesck	(0,000039)	0,062694	(0,000039)	0,062697
LiveAnml	(0,002272)	0,769231	(0,002271)	0,769266
Fish	(0,000363)	(0,007631)	(0,000363)	(0,007631)
OtherfasPPN	0,000543	0,071606	0,000543	0,071609
ProcessFood	0,000861	0,021588	0,000861	0,021589
OtherIndustr	(0,000073)	0,005583	(0,000073)	0,005583
Services	(0,000110)	0,010133	(0,000110)	0,010133

Source: processed by the author from GTAP Database 10 with RunGTAP v3.75

Table I.13. reinforcing the argument that exports are increasing because export prices are much more competitive than prices in Indonesia (in the case of the Fish sector), so producers prefer to sell abroad rather than domestically. Meanwhile, if domestic prices increase compared to export prices, producers will prefer to sell domestically, as a result of which exports have decreased. It can also be seen that when domestic prices increase sharply, such as in Meat and LiveAnml, domestic production will increase.

Table I.14. Changes in the Price Index and Household Consumption Prices in Indonesia (in Percent)

Sector	**Shock PPN**			**Import Duty and VAT Shock**		
	Price Index	Household Consumption Prices on Domestic Goods	Household Consumption Prices on Imported Goods	Price Index	Household Consumption Prices on Domestic Goods	Household Consumption Prices on Imported Goods
Meat	0,421803	0,421803	13,817265	0,421822	0,421822	13,818046
OtherMeat	0,015608	0,015608	(0,000252)	0,015608	0,015608	(0,000252)
OtherLivesck	0,062694	0,062694	(0,000291)	0,062697	0,062697	(0,000291)
LiveAnml	0,769231	0,769231	(0,001263)	0,769266	0,769266	(0,001263)
Fish	(0,007631)	(0,007631)	(0,000158)	(0,007631)	(0,007631)	(0,000158)
OtherfasPPN	0,071606	0,071606	(0,000295)	0,071609	0,071609	(0,000295)
ProcessFood	0,021588	0,021588	(0,000114)	0,021589	0,021589	(0,000114)
OtherIndustr	0,005583	0,005583	(0,000127)	0,005583	0,005583	(0,000127)
Services	0,010133	0,010133	(0,000152)	0,010133	0,010133	(0,000152)

Source: processed by the author from GTAP Database 10 with RunGTAP v3.75

Table I.14 shows the effects of both simulations on household consumption prices, based on the source of goods (domestic or imported) in Indonesia. It can be seen that the imposition of VAT rates and import duties has led to an increase in import prices. In addition,

the decline in import prices in other sectors encourages households to increase their imports (reflected in the previous discussion).

Discussion

From the processed CGE-Gtap results, several results were obtained related to the simulation of the imposition of taxation on imported premium beef which was given IJEPA preferential tariffs and MFN tariffs, although basically the tariffs were the same as MFN, but there were several increases in GDP, imports, trade balance, production, demand. domestically, and prices, even though exports and welfare fell. On the other hand, the increase in import duties actually had a bigger impact than the VAT shock, so that the second shock in IJEPA had a positive effect on Indonesia.

CONCLUSION

The results of this study show that the impact of the IJEPA agreement between the Indonesia Japan, especially related to the import of premium meat, benefits both parties, even though basically the tariff regulated in IJEPA for premium meat is the same as the MFN tariff. There was an increase in gross domestic product, imports, trade balance, domestic production and demand, and prices, but exports and welfare declined. Both simulations showed the same results but the increase in import duties showed a greater magnitude, which means that producers experience a greater positive impact but consumers suffer greater losses as well. This shows that the imposition of VAT accompanied by import duty rates in IJEPA can have a positive effect on the national economy, so this policy is recommended to be continued.

Recommendation

We recommend first, that the government establish a clear classification of premium meat commodities before imposing VAT on beef, particularly premium beef. Currently, there is no distinction between imposing VAT on premium beef and ordinary beef, despite their similarities in the trade world.

Second, if tariff changes are made for premium beef exporting countries, both positive and negative effects on domestic producers and consumers must be mapped. This will ensure that both producers and consumers benefit from the changes, considering the significant impact of premium beef-related businesses on other sectors.

Third, IJEPA's FTA tariff on premium beef, which uses the MFN tariff, may initially benefit Japan as an exporter of premium meat. However, it can be seen that it is more profitable for Indonesia if the tariff is increased. Therefore, in the future, the concept of testing the effects of increasing or decreasing tariffs on FTAs should be carried out both ex ante and ex post.

Finally, for the Indonesian government regarding the imported premium beef business, several notes should be considered. The policy must balance the interests of consumers with those of producers to maintain the sustainability of the meat market in Indonesia. This is crucial, as the culinary sector is a significant driver for other sectors such as tourism and domestic restaurant businesses, which need to remain enthusiastic.

REFERENCES

Aguiar, A., Corong, E., Van Der Mensbrugghe, D., Bekkers, E., Koopman, R., & Teh, R. (2019). The WTO Global Trade Model: Technical documentation.

Alumnus, P. A., Kesehatan, F., Undip, M., Dosen,), Gizi, B., & Masyarakat, K. (2012). HUBUNGAN TINGKAT PENDIDIKAN IBU, PENDAPATAN KELUARGA, KECUKUPAN PROTEIN & ZINC DENGAN STUNTING (PENDEK) PADA BALITA USIA 6-35 BULAN DI KECAMATAN TEMBALANG KOTA SEMARANG (Vol. 1, Issue 2). http://ejournals1.undip.ac.id/index.php/jkm

Amin Gultom, Y., Nurika Fatha Hidayati, R., Abillio Pratama, K., & Wijaya, S. (n.d.). ALTERNATIF PENGENAAN PAJAK PERTAMBAHAN NILAI ATAS BERAS (Vol. 2, Issue 4).

Bagwell, K., & Staiger, R. W. (1999). 7 Regionalism and Multilateral Tariff Co-operation 1.

Corong, E. L., Hertel, T. W., Mcdougall, R. A., Tsigas, M. E., & Van Der Mensbrugghe, D. (2017). The Standard GTAP Model, Version 7. In Journal of Global Economic Analysis (Vol. 2, Issue 1).

Deardorff, A. V, & Sharma, R. R. (2020). RESEARCH SEMINAR IN INTERNATIONAL ECONOMICS Exempted Sectors in Free Trade Agreements. http://www.fordschool.umich.edu/rsie/workingpapers/wp.html

Dixon, P. B. ., & Rimmer, Maureen. (2009). Forecasting with a CGE model : does it work. Monash University, Centre of Policy Studies and the Impact Project.

Ebrill, L. P. ., Keen, Michael., Bodin, J.-Paul., & Summers, Victoria. (2001). The modern VAT. International Monetary Fund.

Kavalski, Emilian. (2016). The Ashgate research companion to Chinese foreign policy. Routledge.

Keen, M., & Lockwood, B. (2010). The value added tax: Its causes and consequences. Journal of Development Economics, 92(2), 138–151. https://doi.org/10.1016/j.jdeveco.2009.01.012

Kuenzel, D. J., & Sharma, R. R. (2021). Preferential trade agreements and MFN tariffs: Global evidence. European Economic Review, 138. https://doi.org/10.1016/j.euroecorev.2021.103850

Nuraini, H., Lesa Aditia, E., & Brahmantiyo, B. (2019). Meat Quality of Indonesian Local Cattle and Buffalo. In Bovine Science - A Key to Sustainable Development. IntechOpen. https://doi.org/10.5772/intechopen.79904

Penetapan Kebijakan, A., Barang, H., Pokok, K., Nuryati, Y., Farid, M., Pengkajian, B., Perdagangan, P., & Perdagangan, K. (n.d.). P R O S I D I N G | 193.

Prakoso, L. D., Darmansah, D., Widia, T., & Hanifah, H. S. (2022). Implementasi Metode Moving Average dalam Analisis Rantai Pasok Daging Sapi di Indonesia. JURIKOM (Jurnal Riset Komputer), 9(3), 623. https://doi.org/10.30865/jurikom.v9i3.4223

Priyono, P., & Priyanti, A. (2018). Perspective on the Production Availability of Animal Protein Source from Livestock in Indonesia. Indonesian Bulletin of Animal and Veterinary Sciences, 28(1), 23. https://doi.org/10.14334/wartazoa.v28i1.1410

Sterzer, S., & Azizah, S. (2021). Trade and cooperation opportunities for the MERCOSUR countries in the livestock sector and beef meat in Indonesia. Jurnal Ilmu-Ilmu Peternakan, 31(2), 175–185. https://doi.org/10.21776/ub.jiip.2021.031.02.11

Stoyanov, A. (2009). Trade policy of a free trade agreement in the presence of foreign lobbying. Journal of International Economics, 77(1), 37–49. https://doi.org/10.1016/j.jinteco.2008.10.001

Subandi, K., & Sari Aryani, A. (2019). Value Chain Analysis Indonesian Animal Husbandry Industry. Journal of Applied Science and Advanced Technology Journal Homepage. https://doi.org/10.24853/JASAT.2.1.21-28

Wijaya, & Arsini. (2021). 524621-none-c3426a2f. Jurnal MSDM STIA BT Gorontalo, VII(1), 91–104.

Anindita, R., Sadiyah, A. A., Khoiriyah, N., & Nendyssa, D. R. (2020). The demand for beef in Indonesian urban. IOP Conference Series: Earth and Environmental Science, 411(1). https://doi.org/10.1088/1755-1315/411/1/012057.

Nuryati, Y., & Farid, M. (2016). Analisis Penetapan Kebijakan Harga Barang Kebutuhan Pokok. Prosiding Seminar Nasional Pembangunan Pertanian.

Pratiwi, A. S. (2021). Barang Kebutuhan Pokok Yang Tidak Dikenai Pajak Pertambahan Nilai. Journal of Law, Administration, and Social Science, 1(1), 47–60. https://doi.org/10.54957/JOLAS.V1I1.78.

Riesfandiari Indri, Ario Seno Nugroho, Imam Tri Wahyudi (2021) Dampak Safeguard Atas Impor Benang Terhadap Perekonomian: Pendekatan Model CGE, Jurnal Perspektif Bea dan Cukai 255 Vol. 5, No. 2, 2021.

Haq, S. Al. (2022). Pengaturan Pajak Terhadap Bahan Pokok di Indonesia. Journal of Islamic Business Law, 6(1). http://urj.uin-malang.ac.id/index.php/jibl/article/view/1313.

Mankiw, N. G. (2016). Macroeconomics (edisi ke-9). Worth Publisher.

Sugiyono. (2017). Metode Penelitian Kuantitatif, Kualitatif, dan R&D. Bandung : Alfabeta, CV

Mukarromah, A. (2018). Memahami Fasilitas PPN di Indonesia. DDTC. https://news.ddtc.co.id/memahami-fasilitas-ppn-di-indonesia-14244.

BPS. (2023b). Impor Daging Sejenis Lembu menurut Negara Asal Utama, 2017-2022. Badan Pusat Statistik. https://webcache.googleusercontent.com/search?q=cache:U9ckLxKwk7YJ:https://www.bps.go.id/statictable/2019/02/14/2011/impor-daging-sejenis-lembu-menurut-negara-asal-utama-2017-2022.html&hl=en&gl=id

OECD, O. for E. C. and D. (2023). OECD-FAO Agricultural Outlook 2023-2032. https://doi.org/10.1787/19991142.

WHO Library Cataloguing-in-Publication Data, 2018 Reducing stunting in children: equity considerations for achieving the Global Nutrition Targets 2025 ISBN 978-92-4-151364-7