To protect, or not to protect

An empirical comparison of two of the EU's free trade agreements



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Abstract

In this essay, I use an empirical approach to explore two recent free trade agreements struck by the European Union: the EU-Korea Free Trade Agreement and the EU-Japan Economic Partnership Agreement. By comparing the EU's tariff concessions on goods in both instances, I identify the goods that were liberalised in the former agreement but excluded from the latter. I subsequently try to explain why these goods are missing from the Japanese treaty, the hypothesis being that the impact of the Korean treaty on imports could serve to predict their possible exclusion. This hypothesis is tested by running regressions estimating the Korean treaty's relative impact on all goods, and then letting the coefficients representing that impact serve as independent variables in a probit model. The results were rather conclusive in that the larger the magnitude of treaty impact on imports of a certain good, the less probability that said good gets liberalised in the Japanese case. Through discussing actors and interests, I interpret this as proof of anti-liberalising lobbying forces affecting treaty text outcomes.

Keywords: EU, Japan, Korea, FTA, PTA, tariffs, liberalising, lobbying

1.	Intr	oduction	5
2.	The	ory	7
2.	1	Industry Actors	7
2.	2	A hypothesis	10
3.	Res	earch overview	12
4.	The	deals	14
4.	1	The EU-Japan Economic Partnership Agreement	14
4.	2	The EU-Korea Free Trade Agreement	17
4.	3	A comparison at a glance	19
5.	Met	hodology	22
5.	1	Identifying differences	22
5.	2	Relative impact of the EUKFTA	23
5.	3	Probability model	25
6.	Res	ults	27
6.	1	Differences	27
6.	2	FTA impact estimation	28
6.	3	Predicting content	28
7.	Sun	nmary	30
7.	1	Modelling results	30
7.	2	Political implications	31
7.	3	Reflections and limitations	32
7.	4	Concluding remarks	34
8.	Ref	erences	35

Table of contents

Table 1: Abbreviations					
AD	Anti-Dumping				
СЕТА	Comprehensive Economic and Trade				
	Agreement, (EU-Canada)				
CGE	Computable General Equilibrium				
CVM	Counter-Veiling Measures				
EC	European Commission				
EU	European Union				
EUJEPA	EU-Japan Economic Partnership Agreement				
EUKFTA	EU-Korea Free Trade Agreement				
FTA	Free Trade Agreement				
GATS	General Agreement on Trade in Services				
GATT	General Agreement on Tariffs and Trade				
GDP	Gross Domestic Product				
GH	Grossman-Helpman				
GPA	Government Procurement Agreement				
VC Global Value Chain					
HS	Harmonized System				
KORUS	Korea-United States Free Trade Agreement				
MEP	Member of European Parliament				
MFN	Most Favoured Nation				
MNE	Multi-National Enterprise				
NTB	Non-Tariff Barrier				
OECD	Organization for Economic Co-operation and				
	Development				
OLS	Ordinary Least Squares				
SITC	Standard International Trade Classification				
SME	Small and Medium-sized Enterprises				
SPS	Sanitary and Phytosanitary measures				
TBT	Technical Barriers to Trade				
ТРР	Trans-Pacific Partnership				
TRQ	Tariff Rate Quota				
US	United States				
USMCA	United States-Mexico-Canada Agreement				
WTO	World Trade Organization				

1. Introduction

As of 2019, the EU has struck a world-leading figure of 41 physical trade deals, as defined by their notification to the World Trade Organization, the WTO (WTO 1, 2019). The latest and seemingly the most comprehensive of these deals is the 2019 Economic Partnership Agreement struck with Japan earlier this year (EU 1, 2019). In an increasingly protectionist global environment, this agreement goes against the current and liberalises a majority of the goods trade between two of the global economy's largest actors, together encompassing a respectable 30 % of the world's total GDP (Bruegel, 2018). Several years earlier, a similar agreement was signed between the EU and Japan's neighbour, the Republic of Korea (henceforth Korea) (EU 2, 2019). In this paper, I will examine the forces active in the treaty negotiating process. It's a fascinating process that seems to be hidden behind closed doors, with little to none explanation to the public regarding why these deals look the way they do. Thus, it is interesting to survey what impact forces such as industry lobbyists can have on the construction of trade agreements. In this study, I will examine whether or not the import-competing industries might have had a finger in designing the EU-Japan Economic Partnership Agreement.

The vast majority of trade agreement literature puts its emphasis on the outcomes of various trade arrangements, while trade agreement contents seldom are subject to any empirical analysis. It is thus my ambition to contribute to the narrow field of empirical analysis of these contents, perhaps serving as a springboard for research to come. While empirical analysis possibly could be applied to any trade agreement, the context of this paper are the two aforementioned agreements between the EU and two rather similar East Asian countries. More specifically, I will use the trade conducted between the EU and Korea before and after their agreement to see whether or not changes in trade induced by that agreement could be used to predict contents of the Japanese agreement. This is a suitable comparison due the strikingly similar trade profiles of the two Asian countries.

Firstly, I identify tariff lines as units of analysis. While there are a multitude of other characteristics in trade agreements strongly affecting economic impact, goods trade and the associated tariff lines are still of utmost importance in any trade agreement. By then comparing the tariff lines between the trade agreements, I end up with a series of differences between the agreements that I subsequently hope to explain. I go on to create a simple trade model for predicting trade volumes for each good before and after the implementation of the Korean agreement, and I can thus estimate the relative impact of the trade agreement on the trade volumes. Those numbers measuring relative impact are further used as independent variables in a model predicting whether or not tariff lines present in the Korean agreement get to stay in the Japanese agreement.

As I'm partly treading uncharted waters, my main goal with this paper is to present a basis for further research. Due to the narrow field, this study should perhaps be viewed as a study of explorative nature, even though it has characteristics of other fields. My conviction in encouraging further research is partly based on the results, because as it turns out, trade agreement content is actually partly predictable.

The paper is divided into seven chapters. In the next chapter, I will discuss the theory behind the parties active in treaty negotiations, to then discuss previous research on tangent subject. I will subsequently explain the method, present the results and finally conclude with a summary of my findings and their implications.

2. Theory

Before delving deeper into the theoretic assumptions used to conduct the analysis, note again that subject of this paper is the contents of free trade agreements, not free trade in itself. I take no stance in determining whether or not more free trade is worse or better, and therefore I need little trade theory regarding FTA impact to build my case on. However, some light assumptions regarding free trade are needed when examining the actors and their agendas. They are in general grounded in basic microeconomics and trade theory and have been confirmed by empirics on several occasions.

2.1 Industry Actors

Initially, I will assume that firms seek to maximize their profits and therefore their market power. From that assumption follows that import-competing industries will seek to keep or raise barriers on their goods. The higher barriers, the less competition and therefore more market power for the domestic firms. The higher level of market power allows the firms to charge higher mark-ups than they would under free trade, thus enjoying relatively higher profits. Another result of the profit-maximizing assumption is that exporting firms will seek to lower trade barriers in the target(partner) country. This hardly requires any explanation, as the exporting firm under free trade could increase the price and/or quantity of exports relative to before, thus increasing profits. The same could be said for importing firms, though they're naturally more interested in their own country's barriers.

It seems natural that anyone with a stake in the contents of an FTA should base their opinion on what has happened in similar situations. Thus, it follows that the actors influencing the outcome of the EUJEPA should have looked at the EUKFTA in order to get an empirical basis for their opinions. The actors, however, consist of many heterogenous groups who should be closely examined to better provide explanations of the outcomes. Before exploring the various sectors, the methodology used requires an assumption often associated with the Grossman-Helpman framework, namely that all sectors are organized to an equal magnitude (Grossman & Helpman, 1994). In reality, this is possibly not the case, but it's an assumption we'll have to make to conduct mathematical analysis. The error terms stemming from this should however fulfil the Gauss-Markov assumptions in the relative sense, in that sectors that were less organized in the EUKFTA

also were less organized in the EUJEPA. The difference in FTA content, which is what I'm exploring, should thus not be a function of lobbying strength as those factors stay constant throughout the analysis. While entirely possible the relative lobbying strength of sectors could have changed in the years between the EUKFTA and the EUJEPA, I deem these changes insignificant enough for the approach to be viable.

While trade agreements have effects all across an economy, the industries with stakes in trade are the actors that take the direct impact. As "the industry" is an extremely heterogenous group I'm going to divide it into several sectors to better analyse impacts and subsequently opinions. The three main sectors used are exporting firms, importing firms and finally import-competing firms. While this division might seem arbitrary as you can't properly place most companies in just one of these folders, the characteristics of these sectors still serve to explain why different actors lobby in different directions. The exporting firms, as said above, are naturally pro-FTAs as it lowers their costs in terms of tariff reductions and/or NTB harmonizing, allowing for higher profits. The same could be said for importing firms: as the border price and the market price are the same the costs of importing are lower. The import-competing firms are naturally against FTAs as duty concessions would increase competition, thus forcing down mark-ups, prices and profits. These three sectors are summarized and exemplified in table 2 below.

Actor	Example in context of paper	Opinion on FTAs	Why?
Exporting firm	EU wine producers	Positive	Lower costs
Importing firm	Japanese	Positive	Lower costs
	supermarkets		
Import-competing	EU car plants	Negative	Increased competition
firm			
GVC-utilizing	Korean cell phone	Positive	Lower cost
companies	producers		
Small- and medium-	An EU farmer	Ambiguous	Administrative
sized enterprises			burdens/larger market

Table 2: Industry actors and FTAs

In addition to this classical division of sectors, the globalized industry can be further analysed using the concept of global value chains, GVCs. A product is nowadays rarely produced using only input factors from one single country but is instead the end result of supplies and services from all around the globe. As a result of these GVCs, a lot of trade is today not final in the sense that a lot of imported goods will later be subject to export. While most GVCs involve multiple actors there are also examples of vertical value chains in the sense that a single company or conglomerate through subsidiaries produce their goods using input factors from worldwide (so-called MNEs). All these examples of firms using GVCs should have a positive attitude towards FTAs. Even if they don't trade in the classical sense that their products will be sold in the other country, they still move goods across borders and thus usually have to pay a lot of tariffs. Lowering tariffs through an FTA should then reduce costs and increase possible mark-ups and thus profits.

A common critique against FTAs is that they tend to be positive only for major firms. As FTAs per definition require some degree of administrative burdens in form of e.g. rules of origin compliance and large firms tend to be more well-equipped to deal with those issues, small and medium-sized enterprises (SMEs) tend to lag behind, facing larger competition but being unable themselves to utilize the larger market size. The EUJEPA counters this issue by including specific paragraphs regarding SMEs, more specifically how all parties must make it easier for SMEs to partake in the FTA by for example offering counselling and guidance to domestic firms seeking to export (EU 3, 2019). It is as of yet unclear whether or not this will have an actual effect: the SMEs still need to devote resources to rules compliance, resources they might not have. It is thus ambiguous whether or not SMEs theoretically would be proponents or opponents of FTAs, as it depends on whether government schemes to reduce administrative burdens are successful or not. Historically, SMEs have in general not benefitted but theoretically they could reach a larger market than under MFN terms, and thus increase their profits given good business decisions (Bruegel).

Another usually vocal group in FTA negotiations is the labour unions (e.g. AFL-CIO). As FTAs tend to increase specialization, they usually bring changes to the labour market, affecting employment, wages and invoking sectoral shifts. This phenomenon is particularly strong in developed-developing FTAs, where the trend is for demand and wages of low-skilled labour in the developed country to drop as those goods and services are instead produced abroad in the partner country. Thus, labour unions tend to be rather sceptical of FTAs, as seen recently in the USMCA

negotiations where the fear was for low-wage Mexican workers to "take" the jobs of American and Canadian low-skilled workers (AFL-CIO). This is why some FTAs include clauses on labour rights and minimum wages: not solely to protect the laborers but to keep some magnitude of lowskilled jobs in the developed country. In the context of this paper, the unions have been fairly silent. This is probably best attributed to the similar wealth level enjoyed by all three parties. As the median wage differs only slightly between the countries, there is no reason for labour unions in any country to believe that their jobs would be outsourced (World Bank 1, 2019). However, the FTAs still bring increased specialization, causing sectoral shifts within countries and thus affecting employment levels in different sectors differently.

Of all actors identified, the industry of largest importance in this context is assumingly the importcompeting industry. This is due to several reasons, but mainly due to their proven influence over politics. Several scholars have noted that these industries hold a disproportionally large magnitude of lobbying power and are subsequently able to affect political decision-making to a high degree (Carbaugh, 2008). The classic trade-theoretic counterpoint to the import-competing firms' influence is that the exporting firms should hold similar power and act as a counterweight. This is probably true to some degree, but it's been noted that the import-competing industries still hold an influence advantage, partly because the damages made to them by liberalisation is much easier to define and calculate than potential export gains are. It also reasonable that these firms hold an advantage over consumer groups who would benefit from liberalisation, partly because they're better organized, and partly because the welfare gains are spread less thin in a smaller group, thus being more visible.

2.2 A hypothesis

A major contribution in the field of treaty content is the series of essays and working papers by Grossman and Helpman (GH) developed in the nineties (e.g. Grossman & Helpman, 1994). They explore, using mathematical models, the prerequisites for FTAs being mutually agreed upon, the exclusion of sensitive sectors and trade-offs between industries in potential partner countries. The ground-breaking factor, which the analysis here conducted partly stands on, is the introduction of the politician or political party as an actor serving their self-interest in getting re-elected first and foremost. With that approach, they're able to construct a framework where the politicians can estimate the effect on voters when liberalising trade in different sectors (Grossman & Helpman,

1994). This effect is due to the industry lobbyists signals to the politicians that different approaches when conducting trade will yield different sizes of campaign contributions, and thus varying magnitudes of voters. A causal chain is thus established: an industry decides their attitude towards trade liberalisation, forwards it to politicians who then calculate whether they will gain or lose voters with liberalising actions (Grossman & Helpman, 1994). Central to this framework is that different industries have different attitudes towards trade: losses in voters from liberalising imports could very well be made up for by gains in voters from the partner country's liberalisation, satisfying potential export industries. Thus, in the context of this paper, I'm building on the GH assumption that the politicians serve as proxies for the people and industries that make up their voter base, rather than autonomous individuals with political agendas.

Keeping these theoretical assumptions in mind, a framework can now be constructed to further conduct an analysis. As noted, Korea and Japan share a very similar trade profile. It is then my reasoning that actors with stakes in the Japanese deal would have first examined the results of the Korean deal before asserting a political position. For example, if a company exporting silk fabrics experienced higher-than-normal profits due to the EUKFTA, they would probably lobby for similar silk fabric legislation in the EUJEPA. Similarly, an import-competing car company may have experienced lower-than-normal profits due to the increased competitiveness of Korean cars, and they would thus in this framework lobby against liberalisation of trade in cars.

Due to the reasoning above, I believe that the import-competing firms hold great influence over the outcomes of these deals. Thus, it is my belief that the EUKFTA impact on import volumes of different goods should through lobbying affect whether or not those goods are liberalised in the EUJEPA. Formally:

"The larger the relative change of imports induced by the EUKFTA for a good, the less probability that good is liberalised in the EUJEPA".

3. Research overview

While the literature regarding FTA impact on various parts of the economy is thorough, literature empirically examining the contents of an FTA is scarcer. There are however several important contributions to the field, some of which will be presented here. Although none of the presented literature directly deals with tariffs, the utilization of empirics to FTA content is interesting in its own right and has served as an inspiration for this paper.

An ambitious juridical approach to the TPP agreement was made by Broude et al (2017). By treating treaty text as empirical data, they try to estimate the amount of state regulatory space countries enjoy after a deal is implemented. The method used is impressive: by manually coding programs and subjecting that software to multiple agreements, and thus lots of data, they end up with a text-to-data approach that maintains transparency (Broude et al, 2017). As they aptly point out, a problem with automated text-to-data software is that they base their analysis in recognizing specific words, which can be a problem in juridical texts such as treaties as the context of the words often play a huge role in determining the value of said word (Broude et al, 2017). Their findings indicate that the TPP would be similar to other agreements, especially intra-American treaties, when it comes to state regulatory space (Broude et al, 2017).

Similarly, Alschner et al (2018) also utilize programming to explore the texts of preferential trade agreements. They contribute to FTA exploring substantially by constructing computerized .xml-versions of hundreds of preferential trade agreements, significantly simplifying the usage of treaty texts as data (Alschner et al, 2018). As they and I have noted, the current form of presenting official FTA documents is sub-optimal for scholarly analysis, as the texts often come in hard-to-manage pdf forms (Alschner et al, 2018). Their contribution is therefore of major importance to the field, especially given an approach treating treaty text as data.

Gerlach (2006) examines the ways interest groups such as industry lobbyists influence EU trade policy. She finds that though it's relatively easy for industries to access politicians with influence over trade policy, there is a low interest from to do just that (Gerlach, 2006). She attributes this to several potential causes: lack of resources and internal industry struggles (Gerlach, 2006). Furthermore, she notes that the EC actually takes steps to try and increase industry input into the decision-making process (Gerlach, 2006). Eckhardt (2011) also questions the common assumption that the protectionist industry groups are more well-organized than import- and export-reliant industries. In examining the anti-dumping measures imposed by the EU on shoe imports from China and Vietnam, he presents an argument for his case by noting the unusually low AD duties (Eckhardt, 2011). He further reinforces his argument by noting that import-reliant industries had mobilised themselves politically through ad hoc organisations devoted solely to lobbying in these AD cases (Eckhardt, 2011).

4. The deals

4.1 The EU-Japan Economic Partnership Agreement

The EU-Japan Economic Partnership Agreement, the EUJEPA, entered into force in early 2019 after years of negotiations (EU 1, 2019). The dynamics foregoing each actor's willingness to enter a deal are extensive and could be subject to further research, but quick summaries still serve their purpose by partly explaining the actors' goals.

Japan has a long history of protectionism and even isolationism. For several centuries during the sakoku period nearly all trade was prohibited and that ended only when the Americans in 1853 sailed their warships there and forced open trade (Kazui & Vedeem, 1982; Mcleod et al, 1943). Since then a lot has happened with the Japanese economy: the Sino-Japanese wars, the world wars and the so-called growth miracle have constituted major shocks, both positively and negatively impacting the Japanese economy (Takatoshi, 1996). The extreme growth exhibited in the post-war period has led the Japanese GDP per capita to converge to OECD levels and transformed a mostly agricultural country to a country specialized in high-technology production of goods such as cars and electronics (World Bank 1, 2019; Takatoshi, 1996). The recent decades have however been all but kind to the Japanese economy, with weak and even negative growth in multiple factors, leading politicians from all mainstream parties to pursue new ideas to revive the economy (Suzuki, 2017). One of these ideas is trade liberalisation, where Japan as of today is a party in 16 free trade agreements, FTAs, all struck in the 21st century (WTO 1, 2019). The results of these FTAs are still up for debate, but it's clear to any spectator that Japan has undergone a shift in trade policy, suddenly a proponent of free trade when previously one of the world's main sceptics. An illustrating example of this policy is assuming a leading role in the TPP through ratifying the agreement the same week as the US with its increasingly protectionist views withdrew from the agreement (Davis, 2017).

An additional explanation as to why Japan suddenly pursues FTAs can possibly be found in the political context rather than the economic. Recent decades have seen Japan's historical rival China extend its sphere of influence substantially through an economic boom partly based on exports (Suzuki, 2017). The ever-growing Chinese influence in the East Asian and global trade markets

could very well motivate the Japanese to increase their efforts in increasing their own trade volumes. As often is the case, the new-found Japanese trade policy is likely a result of a multitude of factors, but it seems likely that the two explanations above have played substantial parts.

As for the EU, it has since the failure of the Doha round had a policy of pursuing FTAs (Billy, 2016). The EU being a product of a trade agreement itself, it's no wonder that the union's members in general share a positive attitude towards free trade, albeit to different degrees. It is however important to remember that the current state of affairs is rather dissimilar from the previous decades of FTAs. As the trade disputes with the US and the complicated Brexit affair illustrate, this deal is struck in a context where the EU is subject to a lot of protectionist forces, both externally and internally (Larik, 2018). While the economic and political reasoning behind the deal probably would be seen as sound in decades past, leading to a deal in those times too, the political implications of the deal are of a way bigger magnitude than they normally would be. This could be seen as a form of signalling to the global trade market that the EU stands steady with the liberalising trade policy it's actually built on, even when protectionist measures grow by the number globally. One could even interpret the politics as a way of trying to reverse the trend towards a trade friendlier environment, assuming pole position in the process (Larik, 2018).

One should however be careful when describing the EU with its trade agenda as some sort of glorified beacon of free trade. While true that the EU is one of the world's main proponents of free trade and leads the world in number of deals, one shouldn't forget that the EU is highly protectionist in some of its affairs (Billy, 2016). The EU was between the Uruguay round and August 2011 a respondent in 81 of the 426 cases filed to the WTO's Dispute Settlement Body (World Bank 2, 2019). Although not shocking that one of the world's biggest actors in trade is also one of the most recurring respondents in complaints, the high proportion undermines thoughts regarding the EU as a champion of free trade. As of today, there are still several topics where you could argue that the EU is using unfair practices on the trade market, such as the heavy subsidies in the aerospace industry or the price regulations regarding agri-food products (ICTSD, 2016; Kareem et al, 2018).

With all of this in mind, there were still enough forces driving on for a deal for it to be finalized. As two of the world's largest economies with trade as major sources of income, and further potential to increase trade volumes between one another, the EUJEPA is a natural product of the economic environment. One should however not forget the multitude of actors driving for and against free trade when examining what's in the deal and, maybe more importantly, what's not in the deal.

As shown in table 3 below, the EU-Japanese trade was before the deal dominated by manufactured goods, with machinery and transport equipment being the largest factors on both markets, but even more so on the Japanese side (Eurostat, 2019). Furthermore, there was a substantial amount of intra-industrial trade in the chemical goods sector, but other than that all trade volumes pale in comparison with the manufacturing sectors (Eurostat, 2019). One should however note that the EU agri-food exports show larger numbers than expected when considering the high tariff and non-tariff barriers on agri-food that Japan used towards the EU at the time (Eurostat, 2019; World Bank 1, 2019). This could be a sign that EU agri-food exports to Japan would be a viable market given that the tariffs are removed and could therefore serve as an explanation as to why the Japanese agri-food market later on turned out to be a focal point of the negotiations (Bruegel, 2018; Suzuki, 2017).

Table 3: EU-Japan Trade 2016					
	Imports		Exports		
SITC	Trade Value (€, millions)	%	Trade Value (€, millions)	%	
Food/live animals	217	0.3	3753	6.6	
Beverages/tobacco	57	0.1	1569	2.7	
Crude materials	687	1.0	1477	2.6	
Mineral Fuels	157	0.2	211	0.4	
Animal/veg. oils/fats/waxes	36	0.1	287	0.5	
Chemical goods	6850	10.4	14469	25.3	
Manufactured goods by material	4791	7.3	4050	7.1	
Machinery/transport	42910	65.1	21712	37.9	
Misc. manufactured goods	7517	11.4	9230	16.1	
Other	2690	4.1	536	0.9	
Total	65911	100	57293	100	
Source: Eurostat					

T 1 2016

The EUJEPA consists of 23 chapters and a large number of annexes, sub-annexes and sub-subannexes (EU 1, 2019). It is thus no easy task to summarize the agreement, leading different spectators to draw different pictures of the agreement as a whole. Some (e.g. Suzuki) characterize it as an "old school"-deal, where tariff slashing is the main component, while more (e.g. Bruegel) speak of it as a comprehensive deal focused on positive integration such as harmonizing product standards and other NTBs (Suzuki, 2017; Bruegel, 2018). Clear is however that a lot of the debate surrounding the EUJEPA has revolved around the tariffs. As of the date of entry into force, the EU and Japan eliminated tariffs on 96% and 86% percent of tariff lines respectively, numbers that according to the current tariff schedule will rise to 99% and 97% within a 15-year period (Bruegel, 2018). While these numbers give the image of drastic liberalisations, one mustn't forget that both the EU and Japan had relatively low MFN tariffs to begin with, with both countries sporting weighted MFN averages around 3.1% (World Bank 1, 2019). There are however significant concessions in the previously high-protected agri-food markets, with e.g. Japan partly liberalising imports on EU export goods such as pasta, wine and pork (EU 3, 2019). Examples of the EU opening up to goods where Japan holds a competitive advantage are found in the automobile sector, identified as a threat by some (Bruegel, 2018). One should however remember that a significant portion of the Japanese cars sold in the EU are actually produced in the EU, boosting employment (JAMA, 2018).

Aside from tariffs, the agreement contains a multitude of provisions on how to lower NTBs. These include, but are not limited to, harmonizing of product standards in the auto, pharma and textile industries and simplification of sanitary and phytosanitary (SPS) protocols (EU 3, 2019; Bruegel, 2018). Lowering administrative burdens on companies active in both countries can be expected to promote trade without losing government revenue. It does however increase the competitiveness of markets, perhaps leaving sensitive sectors vulnerable. Furthermore, there is liberalisation of services trade going past that of GATS (Bruegel, 2018). As significant as all these measures are, they are beyond the scope of this paper and will not be analysed properly. They do however serve to paint an image of the agreement's nature.

4.2 The EU-Korea Free Trade Agreement

The EU-Korea Free Trade Agreement, or the EUKFTA, was signed in October 2010 and entered provisionally into force July the following year (Ifo & Civic, 2018). A wide and comprehensive agreement, it is characterized by some as the first of the "new family" of trade agreements

negotiated by the EU (Ifo & Civic, 2018). While Korea is a smaller economy than Japan, the trade profile of Korea strongly resembles that of Japan, and the countries are thus suitable for comparison (Bruegel, 2018).

As their Japanese neighbours, the Koreans have a history of protectionist policies such as high tariffs, heavy government subsidies and NTBs increasing the administrative burden of exporters (Ifo & Civic, 2018). A former agricultural society, they went through an economic "growth miracle" in the second half of the twentieth century and are members of the OECD since 1996 (OECD 1, 2019). The Korean trade profile has throughout this process evolved into an image similar to the Japanese, a high-technology exporter with an emphasis on the automobile market (Bruegel, 2018). Table 4 below, showcasing Korean exports and imports with respect to the EU, is strikingly similar to the Japanese example in table 2. A formal analysis of the trade similarities was undertaken by Bruegel in 2018, further reinforcing beliefs that the countries are comparable to a high degree (Bruegel, 2018).

	Imports		Exports	
SITC	Trade Value (€, millions)	%	Trade Value (€, millions)	%
Food/live animals	116	0.3	1204	3.7
Beverages/tobacco	10	0.0	315	1.0
Crude materials	568	1.6	1303	4.0
Mineral Fuels	1978	5.5	501	1.6
Animal/veg. oils/fats/waxes	3	0.0	78	0.2
Chemical goods	2255	6.2	5348	16.6
Manufactured goods by material	4456	12.3	3420	10.6
Machinery/transport	23269	64.1	16264	50.4
Misc. manufactured goods	3494	9.6	3313	10.3
Other	141	0.4	513	1.6
Total	36290	100	32261	100
Source: Eurostat				

Table 4: EU-Korea Trade 2011

While the EU's motives behind negotiating an FTA with Korea are roughly the same as in the Japanese case, par reversing a protectionist trend, Korea's objectives are interesting in their own right. An export-fuelled economy, a sizeable part of Korean industry has long been very protected. This protection is best exemplified by the comprehensive government subsidy scheme future exporters long enjoyed (Ifo & Civic, 2018). It was not until the 80s and 90s that the Korean

economy gradually opened up, allowing for competition in markets already dominated by domestic producers (Ifo & Civic, 2018). As participants of the Uruguay round and therefore WTO founders, highly protectionist measures such as these had to be phased out due to GATT, and since then Korea has been actively pursuing multilateral trade liberalisation (WTO 2, 2019). With the apparent failure of the Doha round however, Korea as many countries like them have turned to bilateral, and to some extent (APTA) regional, preferential trade agreements (Ifo & Civic, 2018).

Contents-wise, the EUKFTA is wide and comprehensive, leaving very few rocks unturned. There is a significant amount of tariff elimination, with a majority of tariffs abolished at the date of entry into force (EU 4, 2011). The Korean agriculture sector remains heavily protected however, explained by the fact that Korea is a net importer of food and have historically struggled with sufficient agri-food production (Beghin et al, 2001). There are a lot of NTBs addressed, which is perhaps why spectators have labelled this deal the first of a "new family" of trade deals. Significant NTBs tackled are product standard harmonization in the auto, pharma, chemical and electronics industries (Ifo & Civic, 2018). As natural in agreements like this, there are also paragraphs on rules of origin and dispute settlement. Interestingly enough, the EUKFTA dispute settlement system has never been used as they give the parties the option of solving differences in the WTO's dispute settlement body, a body perhaps more equipped and experienced at solving disputes (Ifo & Civic, 2018).

4.3 A comparison at a glance

Before delving deeper into the methodology and analysis, there are some notable similarities and differences that should be kept in mind going forward. These are by no means results of any deeper reading of the material but merely a scratch on the surface contents-wise presented to provide some context for the reader.

The EUKFTA and EUJEPA deals share a lot of similarities while at the same time diverging at some instances. The similarities stem from the fact that Japan and Korea are very similar countries trade-wise, but are also due to that the same actor, the EU, has partaken in both negotiations with a similar attitude towards trade. Products of their time, the deals are both full of examples of positive integration, while at the same time reducing a lot of existing barriers. One can however

detect a slightly more careful approach to tariff slashing in the EUJEPA, while it at the same time is a wider document in NTBs and non-economic factors than the EUKFTA is. For example, the EUJEPA contains articles on actions towards climate change and subsequently the Paris agreement, being the first trade deal of its kind to address those issues (EU 3, 2019). It is however debatable whether or not that part of the deal is enforceable. The EUKFTA, while wide in a historical context, is significantly narrower than the EUJEPA in addressing non-tariff and noneconomic measures (Bruegel). It however liberalises a wider range of tariff lines than the EUJEPA, especially when looking at the EU's concessions (EU 3, 2019; EU 4, 2011). A comparison of the width of NTB coverage can be seen in table 5 below.

FTA	EUJEPA		EUKFTA	
	AC	LE	AC	LE
Customs Admin	Yes	Yes	Yes	Yes
SPS	Yes	Yes	Yes	Partly
TBT	Yes	Yes	Yes	Yes
Subsidies/CVM	Yes	Partly	Yes	Partly
State Aid	Yes	Yes	Yes	Yes
Pub. Proc.	Yes	Yes	Yes	Yes

Table 5: NTB coverage and legal enforceability

Note: AC= Area Covered, LE=Legal Enforceability. **Source**: Bruegel

Despite the glaring similarities between Japan and Korea trade-wise, one mustn't forget that there are several contextual factors that differ in the negotiations of the deals. The most obvious difference is the market size. While the countries export and import similar products, Japan does it in a significantly larger scale than Korea. On the EU negotiators mind is then that reckless concessions towards Japan could be much more threatening than those towards Korea. Market size plays a huge role in determining gains and losses from a trade deal, and that's partly why the EU has been so successful in terms of attracting European countries to join the union. As the member countries negotiate as a unit, they increase the market size and are therefore able to increase their demands or lower the amount of concessions given. Subsequently, the Japanese negotiators had a

stronger starting position than their Korean counterparts due to their superior market size (World Bank 1, 2019).

The difference in time also plays a part. As of the time of the EUKFTA negotiations, the threat of trade wars was deemed unlikely. Since then a lot has happened: the Trump administration's protectionist trade policies, Brexit, the continued failure to appoint WTO Appellate Body judges and the lack of multilateral trade deals are just examples of the currents in global trade active at the time of the EUJEPA negotiations. With trade conflicts such as US-China and to some extent US-EU, trade wars are an actual threat today, and the FTA: s negotiated have to be seen in the light of this. The interpretation could be made that FTA: s are a form of insurance, reducing the loss in trade in the event of barriers being raised on other fronts. This could be the reason for the increased focus on non-economic objectives in the EUJEPA compared to the EUKFTA, as it's not only a trade agreement but also a form of alliance, come wartime.

5. Methodology

The method used to conduct the analysis in this paper is fragmented into three main parts: identifying differences, measuring FTA impact and predicting differences. My goal is to look at the concessions given by the EU in the two instances, and by looking at trade data establish an econometric model predicting whether or not the concessions given in the EUKFTA also will be present in the EUJEPA. It is then my hope that this model could be useful in explaining and predicting the contents of the EUJEPA, building on the hypothesis above that in the context of the EUJEPA, the Korean agreement could be seen as a sort of testing ground for tariff liberalisation purposes.

5.1 Identifying differences

The process of identifying differences is done by simply analysing the EU's tariff schedules attached to the two agreements. By letting software compare the tariff lines in both agreements, I end up with a list of tariff lines dealt with in one agreement but not in the other. Using a series of IF-statements in spreadsheet and data processing programs such as Excel, SPSS or EViews, I isolate all instances where a concession is given. This is done separately for both the EU's two concession schedules. Using further logical operations, I identify all tariff lines where there is a difference in presence. The analysis is done on the HS-4-digit level, where any sort of concession is coded as a 1, and the absence of concessions as a 0. The HS-4 level is chosen mainly because its manageability, but there are econometric merits to it as well. While not as detailed as HS-6, 8 or even 10, it still provides a suitable number of observations. In general, you strive for as many observations as possible as it should increase precision, but in this case a more detailed study would complicate the analysis vastly. This is largely due to the fluctuations in trade being of a much larger magnitude the closer you look. By pooling tariff lines together at the HS-4 level, the variance becomes small enough for statistical operations to be of any meaning.

It should further be said that concessions can take several forms. The most common one is naturally the tariff reduction, with its many different characteristics. The reductions differ in two main ways: magnitude and time. By this I acknowledge that tariff reductions can be partial or total and be done instantly or over a phasing period. In addition to the tariff reductions there are especially in the

Japanese case a significant amount of tariff rate quotas, TRQs, used. These TRQs are often dealt with in agreement by either gradually increasing the preferential quota or by lowering the magnitude of the tariff applied once the quota has been filled. While the dummy-coding approach might seem shallow, it has several merits, the most meaningful one being clarity. As the end result is a list of goods the EU has chosen not to liberalise in the Japanese instance, you end up with a sizeable but manageable number of units that while interesting in their own right will be subject to further analysis. To more easily get an overview, these goods could be lumped together into broader categories, using standards wider than HS-4 such as the SITC categories.

There are however significant limitations when using this approach, limitations that possibly could be dealt with using further research and more sophisticated software. The most obvious problem is that the approach does not consider magnitude of concessions at all. For example, an instant tariff drop from 30% to 0% is classified just the same as a slowly increasing TRQ. A dummy-coding approach as the one used here could then misrepresent whether or not there's any significant difference in concessions given. Another limitation stemming from the dummy-coding is the absence in accounting for the number of tariff lines at HS-6, HS-8 or HS-10 levels conceded. A single good partly liberalised at the HS-10 level is classified as there being a concession and is thus classified the same way as a concession where all lines under the 4-digit heading are completely liberalised. While the implications for trade are fundamentally different, the coding used still sees them as identical. All source material used is the official documents themselves (EU 3, 2019; EU 4, 2019).

5.2 Relative impact of the EUKFTA

In the next step towards the content predicting model, I've chosen to model the evolution of imports for each and every tariff line imported from Korea to the EU between 2000 and 2016 with simple OLS estimations. The thought behind this is that the FTA must be allowed to have differentiating impacts on different goods, much like a fixed effects-model with individual coefficients. In this OLS model, a dummy for the FTA being in force is implemented to capture the relative impact of the FTA. The equation is postulated as follows:

$$\gamma_{i,t} = \alpha_i + \beta_{1,i} * d_{i,t} + \beta_{i,2} * t + u_{i,t}$$

 γ is the trade volume of good *i* at time *t*. The equation is quite primitive: one could imagine using sophisticated gravity or CGE models to properly capture all mechanics. However, most values often used to predict trade (e.g. language, distance, currency, colonization) do not differ at all with time, and would thus serve little purpose. In this equation, a time factor is instead included to capture exogenous factors, but it says little to nothing about what those factors are and through which mechanics they affect trade. It does however successfully control for background factors, as the FTA-dummy might otherwise serve as an instrumental variable for time-specific effects. A negative aspect with that is of course the collinearity with the FTA dummy, which assumes the value 1 for all lines dealt with in the EUKFTA after implementation. We further assume that the error term $u_{i,t}$ fulfils the Gauss-Markov assumptions, that is:

$$E(u_{i,t}|x_{i,t})=0$$

and

$$Var(u_{i,t}|x_{i,t}) = \sigma_i^2$$

As the evolution of EU-Korean trade hasn't been following an exponential trend but rather stayed relatively even, I see no reason to assume that the error terms would be correlated with time, nor the magnitude of their variance. This is why this rather experimental specification works: the aggregated trade volumes haven't been evolving in an exponential fashion, but rather something like a stationary time series or a linear function of time.

While it says itself that trade in reality isn't a linear function of time and FTAs, this equation is merely a way of estimating relative impact of the EUKFTA on different goods. Therefore, what's of interest here is the first beta-parameter. As trade volumes, and thus coefficients vary greatly in size between goods, I will from this analysis save the *t*-statistics from the parameter. That way, impact is standardized between goods and won't let the lines with larger volumes, e.g. cars, run away with the analysis. The thought behind is logical and grounded in the theory used. Every industry has their own self-interest at heart and should thus not worry about the relative impact of other industries on the merit of them being bigger. As the mechanic examined is industry lobbying affecting each and every tariff line's being or not being in the EUJEPA, it would make no sense to let the larger industries impact the final analysis in proportion to their size: every single tariff line is an individual unit of analysis in this paper and must be treated as such.

Note in the equation that every coefficient is conditioned on *i*. This is due to the model being used to compare standardized coefficients, not explain variation in γ . I'm thus not running an OLS: I'm running 1258 individual regressions, one for each HS-4 tariff line and subsequently I'm saving the standardized coefficients and their respective *t*-values. All trade data is extracted from the United Nations' Comtrade database (UN, 2019).

5.3 Probability model

A dummy-variable is constructed for all HS-4 tariff lines, where y = 1 for all lines excluded in the EUJEPA that were previously included in the EUKFTA, and y = 0 for all other cases. The cases where y = 0 are thus not limited to the lines liberalised in both agreements, but also includes cases where the lines were excluded from both agreements. The reason that the y = 1 interpretation only goes one way is that there was not a single instance of a tariff line liberalised in the EUJEPA that wasn't also liberalised in the EUKFTA. Using this grouping, y = 1 can be interpreted as a change in policy, while y = 0 can be interpreted as a policy status quo.

With a binary dependent variable, it's useful to estimate equations forcing all predicted y-values to assume values between 0 and 1. Such an equation, the probit model, is used in this analysis. The formal equation can be presented as below;

$$\Pr(y_i = 1 | x_i) = \int_{-\infty}^{\mathbb{Z}} \Phi(u) du$$

where

$$\Phi(u) \sim N(0,1)$$

and

$$\mathbb{Z} = f(x)$$

u is a dummy doing nothing else than providing a standard normal. Of interest to the analysis is the form the function f takes, and whether or not the coefficient regarding x are significant. Before utilizing this function however, an operationalization of x is necessary, as simply saying "trade data" doesn't suffice when conducting statistical analysis.

The *t*-statistics will then be used as independent variables in the probit model, i.e. $(t_i | \beta_{1,i}) = x_i$.

To capture the workings of a trade deal, I've chosen the function $f(x) = \mathbb{Z}$ to be either quadratic or in absolute numbers, i.e.

$$\mathbb{Z}_1 = \delta_1 + \psi_1 x^2$$

or

$$\mathbb{Z}_2 = \delta_2 + \psi_2 |x|$$

The reasoning behind this is that are two actors in a trade agreement, and thus only the magnitude of the FTA's impact should matter, not the direction. For instance, a large positive x-value indicates a flooding of Korean imports on the European market, which should lead European negotiators to be careful with that good when constructing the next trade deal. Respectively, a large negative statistic would indicate a downsized import which could be attributed to more domestic production. Thus, Japanese negotiators should know to stay away from those lines, as they might indicate a European competitive advantage, with liberalisation possibly hurting their export and/or domestic markets.

6. Results

6.1 Differences

Using the method described above, I've produced a list of 828 HS-4 tariff lines conceded by the EU in the EUKFTA that then were exempt from the EUJEPA. As previously stated, there is interestingly not a single occasion of a tariff line being present in the EUJEPA but missing in the EUKFTA. In terms of tariff cutting width, the EUJEPA is thus a much narrower agreement than its Korean predecessor. While the number of increased exemptions is interesting in their own right, in the context of this paper it's more interesting to survey what types of goods are targeted by these extra exemptions. As it's too much to present a full list of 828 goods in text, I've categorized them by SITC (rev.4) in table 6 below.

SITC	Frequency	Percent
(0) Food and live animals	103	12.4
(1) Beverages and tobacco	8	1.0
(2) Crude materials, inedible, except fuels	23	2.8
(3) Mineral fuels, lubricants and related materials	5	0.6
(4) Animal and vegetable oils, fats and waxes	19	2.3
(5) Chemicals and related products, n.e.s.	162	19.6
(6) Manufactured goods	241	29.1
(7) Machinery and transport equipment	108	13.0
(8) Miscellaneous manufactured articles	159	19.2
Total	828	100.0

Table 6: Differences in EU concessions between the deals by SITC4 category

It's very interesting that a large proportion of excluded goods fall under SITC-categories where there's a lot of trade going on. That being said, those categories are also the ones containing the most HS-4 tariff lines which serves to explain the large proportion.

6.2 FTA impact estimation

In the next step the OLS regressions are calculated for each and every tariff line. The primitive equation was unsurprisingly not very good at predicting values of γ , but then again, we're not interested in γ -variation for this particular analysis. As the purpose of this was to measure relative impact of the EUKFTA on all goods, the *t*-statistics for the dummy coefficient $\beta_{1,i}$ were of importance, and luckily a majority of those statistics came out significant. While there was a significant number of non-significant $\beta_{1,i}$ coefficients, we have to assume that they even themselves out in the next step of the analysis. While this assumption lightly restricts the validity of the analysis, the fact that they're all treated as independent, stochastic variables on the same scale should limit the errors stemming from the extra inference.

The *t*-statistics exhibit a mean value of 0.139, with a standard deviation of 1.519. While this means that we cannot state that the EUKFTA in general had a positive impact on imports, that's not what the framework is constructed for. One should also remember that this mean is negatively skewed as all lines missing from the EUKFTA took the *t*-value of 0. Should one try and analyse the EUKFTA's impact on imports, one should probably not let the impact of goods not even in the EUKFTA ruin the analysis.

6.3 Predicting content

In this step, two additional series are also constructed, one containing the squared *t*-values and one containing their absolute values. These modified *t*-values are then entered into the probit model using the two different specifications. The results are presented below.

Table 7: Probit model estimations, squared t-statistic						
Variable	Coefficient	Standard error	Z-statistic	p-value		
Constant (δ_1)	0.178	0.044	4.100	0.000		
t-statistic ² (ψ_1)	0.191	0.019	9.940	0.000		
$R^2 = 0.084$						

Table 8: Probit model estimations, absolute t-statistic

Variable	Coefficient	Standard error	Z-statistic	p-value		
Constant (\delta ₂)	-0.209	0.053	-3.956	0.000		
t-statistic (ψ ₂)	0.901	0.056	16.115	0.000		
$R^2 = 0.217$						

As seen above, both the squared and the absolute specification return significant positive values on the coefficient regarding the *t*-statistics. The main differences between the specifications are the R^2 -values and the magnitude of the coefficients. There is also an interesting change in sign on the constant between the models. These characteristics will all be discussed below.

To test for robustness, both specifications were also subject to logit and linear probability tests. Both the logit and the linear specifications also returned p-values at 0.000 for all coefficients, par the constant in the linear test of the t-squared specification which returned a p-value of 0.026. These tests for robustness are not part of the analysis per se, but rather controls to confirm the results in case there was something particular with the probit specification providing misleading results.

7. Summary

7.1 Modelling results

Both specifications of the probit model fully support the hypothesis presented earlier: the larger the impact of the EUKFTA on trade volumes, the more likely that the tariff line will be excluded from the EUJEPA. In terms of the normal distribution modelling, this means that the larger the impact, the further to the right we move upper integral limit. Recalling the shape of the distribution, the implication is that the connection is by no means linear, as the largest changes in probability given changes in \mathbb{Z} are given near the 0 mark. Instead, the returns in terms of probability changes are diminishing once the 0 mark is reached. Interestingly enough, one of the models had a constant above 0 and the other put the constant below 0. As the models both disallow negative values of x, the constants could be represented as the minimum value of \mathbb{Z} allowed. As the quota of tariff exclusions between the two deals was in fact larger than fifty percent, the sign change of the constant is interesting, but explained by the *t*-values. As a significant number of the *t*-statistics were in the range of [-1,1], squaring the variables in general decreased their absolute values. So, in comparison the absolute model exhibited larger values of x and could thus have a smaller constant in order to fit the data. The squaring is further responsible for the variation in ψ magnitudes. While some of the absolute numbers grew smaller, those with t-statistics above 1 grew largely in absolute terms. Thus, with some x attaining values up to even 52, the coefficient ψ grew small to account for these anomalies, leading to the smaller x-values having little to none impact on the probability of exclusion. All in all, the quadratic model was not a good one and provides little explanatory value. Instead, the rest of the discussion will focus on the more successful of the models: the absolute numbers model.

The absolute numbers model is a success significance-wise, provides a higher R²-value than its quadratic counterpart and is more intuitive. Given that the EUKFTA had no or low impact on import volumes for a certain good, chances are that the EU are also willing to give concessions on that good when conducting their next deal (due to the negative δ). Respectively, if the EUKFTA changed the import market for a good significantly, the probability of that good being excluded from the EUJEPA rises. This is a strong argument for why the hypothesis presented could be true,

as the mathematical relationship suggests that actors have in fact evaluated the trade impact of the EUKFTA when constructing the Japanese deal.

7.2 Political implications

The mechanics behind the relationship proven above are many, but they're all based in the many actors' differing interests. As the data confirms that the relative impact on imports induced by the EUKFTA does in fact affect the probability of exclusion, there is absolutely reason to suspect that import-competing industry lobbying has influenced the negotiation process. While there may be other factors in play than just the lobbying, it seems likely that lobbying constitutes a large portion of the influence. Whether or not that's a bad thing is however debatable.

On one hand, it's only natural that politicians and negotiators answer to their domestic industries' concerns. There is nothing bad about larger profits for domestic firms per se: it's only when there's a trade-off regarding welfare in other sectors that the influence can be regarded as a problem. However, conclusive microeconomic and trade theory suggests that there is in fact a trade-off, and the group that is hurt by not liberalising is first and foremost the consumers. As there is reason to suspect that import liberalisation would have a negative impact on price levels and thus a positive impact on consumer welfare, there is a conflict a hand, a conflict the producers seemingly have won in this regard. The cause for this is well-documented and can partially be explained by the number of actors in each group. As the consumers by far outnumber the producers, there is reason to suspect that they're a more heterogenous group with larger problems organizing themselves. The trouble for consumers organizing themselves isn't all sheer numbers, it's also the fact that they live actual lives and place little importance on these matters, whereas industry groups by definition work full-time towards profit maximization for their firm and their industry.

In terms of policy, there might be a change needed here if the EU is to strive towards a better functioning market economy. The issue at hand here is transparency, as the consumer groups might react more strongly to excessive lobbying if they had insight to the process. As of these negotiations, there was no binding transparency initiative in the EU, merely a voluntary lobbyist registration with zero legal enforceability. As of today, however, an initiative has been launched and passed requiring members of parliament to disclose their meetings with interest groups publicly. While this legislation only affects MEPs involved in drafting or negotiating legislation,

it is a welcome step towards a transparent process, and perhaps through that a better functioning market economy. In fact, it is written into the Lisbon Treaty that the EU should strive towards a highly competitive market economy, and as a requirement for a well-function market economy is symmetric information, all steps should be taken to increase transparency.

7.3 Reflections and limitations

As content as I am with the results, there is room for improvement in this study. This is partly due to the relatively narrow scope of the paper, but also due to lack of expertise on the author's side. I will thus present the limits of the analysis conducted and, in some cases, propose possible solutions for these issues in the context of further research.

A self-imposed limitation is that I've only conducted analysis on tariff concessions. There is so much more FTA content that affects trade flows than just the applied tariff. Examples of actual content in the agreement that should affect trade are TBT and SPS compliance procedures, product standard harmonization and eligibility compliance just to name a few. In reality, pretty much any measure regarding NTBs and trade facilitation can be expected to impact trade flows in one way or another. Thus, my analysis could seem biased when I for example state that the EU doesn't give concessions on plants and parts of plants (HS1211), when in reality the simplified SPS measures might indeed impact plant trade. The negative impact of this limitation on the conclusions drawn is hard to estimate, but it's been proven empirically that NTBs and trade facilitation measures substantially impact trade (see e.g. Djankov et al, 2010). To tackle this, one could go on to assume that all goods are affected by NTB impact in the same way, thus minimizing the skewing effect. While not 100 % true, it still provides exogeneity to some extent and thus improves the analysis.

In terms of further research, the analysis could be expanded to taking NTBs into account. This however requires expertise in law as well as more sophisticated mathematical models than the ones applied here. Not only is it hard to quantify the extent of which an NTB paragraph in an FTA simplifies the trade procedure, but also the extent of that measure's impact on trade. One would probably need to use a large sample size of NTB measures to get some sort of quantifiable operationalization of the large variety of NTB measures and the goods they subsequently impact, to then enter the actual measures in the examined deals into a mathematical framework such as a CGE model to properly capture the relative impacts.

As for the tariff concessions, there are problems that I've previously discussed in that I disregard magnitude and phasing time and solely focus on whether there's a concession or not. Furthermore, I've made a choice to only survey the EU's tariff concession when in reality there are two more actors here whose tariffs possibly could be examined. Disregarding the concessions given on the other side imposes limitations, but also merits to some extent. One would using logic assume that concessions given by one party in an FTA is correlated with the concessions given by the other party. In other words, there are no free lunches in the world of trade negotiations, as you have to concede something to get something. In the context of this paper, this means that the smaller magnitude of concessions given in the EUJEPA compared to the EUKFTA isn't only the EU's responsibility, but partly the product of Japan not willing to open up more. This being said, it would be hard to examine Korea and Japan's tariff concessions in a similar manner as the EU's as they lack comparison points. The EU concessions are easy to handle due to them dealing with two similar countries during a short time span, while there are no trade deals on the other end that could serve a similar purpose (par possibly the KORUS). One could imagine looking at the Japanese concessions and letting the Korean concessions serve as proxies for Japan due to the similar trade structures, but then there's a substantial problem in that they don't share the same MFN tariffs. In the EU's case, we could assume that they applied roughly the same tariffs towards Korea and Japan ex ante, but we have no reason to believe that to be the case if letting Korea serve as a proxy for Japan. This could possibly be remedied by actually comparing the MFN tariffs applied by the countries, but even so that would require some relatively weak assumptions and estimations if then comparing concessions.

There is also room for improvement in the predicting model. A point that might be improved by further research is the function predicting trade given tariff line and year. One could imagine constructing a sophisticated model, taking into account exogenous factors impacting trade. Especially factors that change over the years, such as GDP and growth, should have places in such a specification, as my time variable can't fully capture those effects. Furthermore, one could, and probably should, deviate from my model of trade being a linear function. While loglinear or loglog specifications are often used, one could also model trade using time series mechanics, allowing for lag in the dependent variable. The reason behind allowing for autocorrelation is found on the company level: a deal with a foreign exporter is rarely struck year by year, instead spanning several years to provide input consistency.

A better trade volume predicting model would increase the accuracy for the extracted *t*-statistics and thus improve the analysis. There are in some cases relatively large inference statistics for the predicted FTA coefficients, and this would be remedied by a better model. A problem hard to model away however is the lack of time under the FTA. While it's possible to go back in time and enter a larger number of observations where $d_{i,t} = 0$, the number of observations where $d_{i,t} = 1$ is limited by the fact that it's only reasonable to use data for the period before the finalization of the EUJEPA, but post EUKFTA-implementation. A possible remedy is looking at monthly trade statistics to increase the number of observations, but if the model suffers from an exogenous instrumental factor present these years, a monthly model will do nothing to solve that problem.

Finally, one could also specify the function f differently. While natural to me that the magnitude is what's of importance, one could possibly construct a model such that negative values were allowed. That would only make sense however, if comparing the import data with corresponding export data. By doing that, one could allow for the different actors to have different levels of leverage, which is probably truer to reality than my model.

7.4 Concluding remarks

In this paper, I have shown that the EUKFTA impact on imports affected the presence of tariff reductions in the EUJEPA. While I interpret this as proof of anti-liberalisation lobbying, there could of course be other explanations. However, I would guess that the goal best achieved in this paper isn't the social conclusion but rather the methodological steps taken. Lobbying isn't solely an economic issue and could be proven by other economic means as well as other disciplines such as political science, international law, sociology and business to name a few. I do however think that the approach of treating FTA content as empirical data is a field that economists could explore more, and thus I hope that my paper with its methodology could serve as a steppingstone for studies to come.

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