1. Introduction

Norway became independent in 1905, since then the country has grown strong and is today one of the richest countries in the world (Globalis 2021). Norway's main export is oil, natural gas, fish, and aluminum. A part of the money from oil export has been saved in a fund created by the Norwegian state. The money is planned to be used for future needs and in downturns in the world economy. In this way, Norway can prevent declines in its own economy.

The politicians wanted Norway to join the European Union, but the majority of the people voted against the membership both in 1972 and 1994 (SienceNorway 2012). Norway has had several free trade agreements throughout the years. Norway joined the North Atlantic Treaty Organization (NATO) on the 4th of April 1949 (Norway and NATO u.å.). Until today Norway is still an important and active member of the organization. NATO is a defense alliance between 28 countries within Europe and North America with the purpose to establish security guarantees, crisis management operations and international peacekeeping operations on both sides of the Atlantic (Säkerhetspolitik 2010).

In 1960 the European Free Trade Association (EFTA) was established between seven countries: Norway, Switzerland, Denmark, Portugal, Great Britain, Sweden, and Austria (Norway's free trade agreements 2021). Nowadays EFTA is an inter-governmental organization between Norway, Liechtenstein, Switzerland, and Iceland. Another agreement that Norway is also included in, is the European Economic Area. 1st of January 1994 the EEA agreement was established between the European Union members, Norway, Iceland, and Liechtenstein (Mission of Norway to the EU 2017). It was signed earlier in 1992. The four freedoms of the EEA agreement focus on free movement of capital, goods, services, and persons within the EEA. The agreement also includes cooperation in several areas such as education, research and development, the environment, consumer protection, social policy, tourism, and culture.

Recently, several political parties in Norway started to question the EEA agreement and wanted to oppose the agreement (Euobserver 2021). This could lead to Norway leaving the EEA membership. The purpose of this report is to examine the impact of the agreement on

trade between the parties and how the trade in the countries would be affected if the agreement would be removed and is compared to regional trade agreement (RTA). It is especially interesting to examine this topic, to see if Norway has advantages of staying in the EEA agreement and avoiding the potential negative consequences.

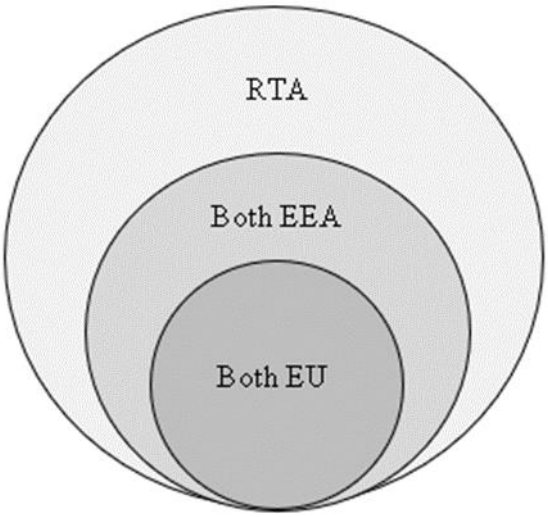
1.1 The difference between RTA, EEA, and EU

A treaty signed between at least two governments that define the trade rules for the countries is called for a regional trade agreement (RTA) (Worldbank 2018). The agreement encourages free movement of goods and services between the members borders. RTA focuses on reducing or removing trade barriers such as tariffs. There are many different regional trade agreements such as NAFTA and EU. There are several types of regional trade agreements which depends on the commitment level and arrangement between the governments (CFI u.å). The types are preferential trade areas, free trade area, customs union, common market, economic union, and full integration. The benefits of RTA are economic growth, greater volume of trade, and higher variety of goods. The difference between RTA and the agreement itself is that the RTA mainly focuses on the bilateral trade and does not include other provisions such as free movement of capital and labor across the borders.

The EEA agreement is founded on the same rights for all EEA countries concerning trade, investments, insurance, buying and selling services, working, and studying around the EEA area (Regjeringen 2021). Trade itself is included in the RTA but all the other regulations named above are the additional provisions of the EEA. The agreement also guarantees the EU Single Market's four freedoms, non-discrimination, and same rights of competition in the area. The agreement also assures the involvement of Norway, Iceland, and Liechtenstein in several of the EU programs and institutions, as well as entitles the three countries to second national experts to the Commission. Norway, Iceland, and Liechtenstein can provide inputs during the preparation phase, when the commission drafts recommendations for new law to be integrated into the EEA Agreement, even though the three countries have no official access to the decision making in the European Union. The right to participate in commission committees and expert groups is included. The countries also have the option of submitting comments on proposed legislation. The countries are required to allow an independent monitoring authority, the Efta surveillance authority, and the Efta court, to guarantee that Norwegian authorities and enterprises abide with the EEA Agreement.

The European Union was established in 1958 with the mission of "promoting peace, its values, and the welfare of its peoples" (Ui u.å). Creating development and prosperity, addressing the climate crisis, and ensuring Europe's energy supply are among the concerns the EU must address. The European union is based on the principle of representative democracy (Publications Office of the European Union 2021). This means that individuals have direct representation in the European Parliament, while the member states have representation in the European Council and the European Union Council. The people may also affect democracy in the Union, by commenting on EU policies throughout the decision-making process or proposing modifications to current laws and initiatives. The additional provision of the EU compared to the EEA is that it covers policies such as custom union, economic and monetary union, justice, and home affairs. The EU also include common trade policy, foreign and security policy, agriculture policy, and fisheries policy.

Because of the differences between these agreements, it is interesting to investigate the additional effect on trade in addition to RTA by being part of, for example, the EU and the EEA.



1.2 Purpose

The purpose of the research is to investigate whether the free trade agreement between the European Union and Norway has had a positive impact on bilateral trade between the parties. It is also interesting to study what effects; other factors have on trade. In a further analysis the impact on trade if the agreement was removed is examined, to get a grater insight of the EEA.

1.3 Research questions

- Has the EEA agreement between the EU and Norway had a positive impact on bilateral trade between the countries within the agreement?
- What other factors have affected trade between studied countries?
- What would trade look like if the agreement between EU and Norway was removed?

1.4 Method

The report is based on a quantitative study with collection of data from the CEPII Gravity Database with intra-national and international trade. A quantitative study makes it possible to use the gravity model that is very intuitive, has a solid theoretical foundation, flexible structure, and predictive power. The data used in the research is based on 48 countries, including members in the EU, EFTA agreement and countries in G20, using four-year intervals within the period 1986-2002. Members in the EU and the EFTA are included to be able to answer the research questions. The choice of including countries in the G20 is because they have the most influence on world trade. Data is processed in STATA with purpose to answer the research questions. The regressions are based on OLS- and PPML-estimates with exporter-time and importer time fixed effects to control for the multilateral resistance. The pair fixed effects are also included in the regressions to solve the endogeneity problem. The variables used in the research are based on the Gravity model and earlier studies.

1.5 Disposition

Section 2 describes the earlier similar studies. Section 3 focuses on the theoretical background for the Gravity model with addition to the Krugman model. The data is introduced in section 4 and the empirical model is introduced in section 5. Section 6 focuses on the two main tables that are used to answer the research questions. In sections 7 and 8, the results are analyzed and conclusions together with policy recommendations are given.

2. Literature review

One of the main previous studies used as inspiration for this research is the book "An advanced Guide to Trade Policy Analysis: The Structural Gravity Model written by Yotov, Piermartini, Monteiro and Larch from 2016. Authors studied the free trade agreement NAFTA and the effect of removing NAFTA on the three NAFTA members and 66 trading partners (Yotov et al. 2016). The partial effect, conditional general equilibrium and full endowment general equilibrium was examined. The results indicate that NAFTA had a positive effect on exports for all three members Canada, Mexico, and USA. The export in the rest of 66 countries was negatively affected by the agreement. Therefore, it would only be beneficial for the non-members to remove the NAFTA agreement. The welfare effects that are measured in real GDP are positive for the three members and slightly negative for the remaining countries. Both consumers and producers in NAFTA members are positively affected with lower inward- and outward multilateral resistance. Producers in many of the remaining countries are affected negatively due to lower producer prices.

Other previous studies of interest are studies about similar free trade agreements with the EU. Jachia and Teljeur (1999) examined the free trade agreement between the European Union and Southern Africa in 1996. Authors examined the effect of the free trade agreement on the bilateral trade flows between EU and Southern Africa. Authors analyzed the effect both on an aggregate and a sectoral level, to determine the effect on the balance of payments and government income, but also the effect for specific industries. The main results indicate that the free trade agreement between EU and Southern Africa has an uneven effect on the bilateral trade flows. The impact is relatively large on Southern Africa's import from the EU and relatively small on the export to EU. The study indicates that the agreement has an increase of 2.3-12.3 percent in the import from the EU and an increase of 1.3 percent in the export to the EU. On the aggregate level, the results show that the agreement has a negative effect on the balance of payments and on the government income. On the sectoral level, the results indicate that the agreement has the largest positive effect on the export of agricultural and textile products.

Chambers et al. (2018) examined the free trade agreement between the European Union and the Republic of Singapore from 2015. The agreement is one of the "new-generation" agreements. The EU-Singapore agreement would lead to a more liberate trade relationship

between the countries with a reduction of tariffs and other trade barriers. The agreement includes provisions on investments, competition, public procurement, sustainability, global trade, and development. The main potential effects on trade using the econometric model are estimated to be a 10 percent increase in trade volumes and larger foreign direct investment within EU and Singapore. The agreement is also expected to generate an increase of the GDP. The increases are relatively small, 0.06 percent in the EU and 0.35 percent in Singapore. The EU-Singapore free trade agreement generally seems to be an important, positive, and ambitious agreement for future development within the EU and Singapore. It will create a stronger relationship between the countries and develop new trade and investment opportunities in the EU and Singapore. However, some businesses, particularly small and medium-sized businesses, have expressed concern. The authors in this study emphasizes that it is important that commitments made under sustainable development provisions be constantly monitored to ensure that they are implemented and used effectively in practice.

Since there is a possibility that Norway will leave the EEA agreement, it is also interesting to include a study about Brexit. Oberhofer, H. and Pfaffermayr. M. (2021) estimated the trade and welfare effects of Brexit with addition to the gravity model. The authors assumed different counterfactual post-Brexit scenarios to generate the effects of Brexit. The main results indicate that the exports from the United Kingdom to the European Union are expected to fall between 7.2 percent and 45.7 percent six years after Brexit. The negative trade impacts in the UK are only partially mitigated by increased domestic trade and trade with third countries, resulting in a real income decrease of 0.3 percent to 5.7 percent. Although the predicted welfare impacts for the EU are close to zero, some countries, such as Ireland, are likely to suffer welfare losses.

Despite many similarities, there are also several differences between the previous studies and this report. The reports examine similar types of research questions, but the examined countries and agreements are different. This research also includes other variables than the previous studies. Additional variables used in this research are one country in the EU, one country in the EEA, both countries in the EU and both countries in the EEA. The variables both EU and both EEA shows the additional gain in trade from being a member in the agreements. One EU and one EEA shows the effect on trade when only one country is part of the agreement.

3. Theoretical background

3.1 Gravity model

Newton explained in his Law of Universal Gravitation that any particle in the universe attracts any other particle (Yotov, Piermartini, Monteiro & Larch, 2016). That can be explained by the force that is proportional to the product of particle mass and inversely proportional to the square of the distance between the particles. Newton's theory can be applied to international trade. The theory assumes that countries of the same size are drawn to each other. The size is measured in size of the market and gross domestic product. The theory also explains that a longer distance reduces the attraction between the particles, this means that a longer distance between the countries would lead to less trade between them. There are also some exceptions in the model due to, for example, the uneven distribution of raw materials in the world, and other historical and cultural factors. The earliest most known studies of trade using the gravitational model were by Ravenstein (1885) and Tinbergen (1962). Anderson (1979) expanded the model with Constant Elasticity of Substitution (CES) expenditures. However, the model became most useful in the early 2000s.

Gravity model can be explained as several countries N in the world where each country produces different goods and then exports the goods to other countries, as well as imports other goods from other countries (Yotov, Piermartini, Monteiro & Larch, 2016). In this way, each economy receives several differentiated products in a very efficient way. The differentiated product is equated with Q_i and the factory gate price is equated with p_i. The value of domestic production of the differentiated products can therefore be equated with $p_i\ Q_i$. Domestic production represents the nominal income of the country *i* and is denoted as Y_i. The country's aggregate expenditure is referred to as E_i. Gravity models can be both derived from the demand and supply side, in our example we will start from the demand side. Consumer preferences are given by the CES utility function for country *j*. Preferences are assumed to be identical between countries. $\sigma > 1$ shows elasticity of substitution between different goods from different countries, $a_i > 0$ represents CES preference and c_{ij} represents consumption in country *i* of goods from country *j*:

$$CES\ utility\ function\ for\ country\ j = \left\{ \sum_i a_i^{\frac{1-\sigma}{\sigma}}\ c_{ij}^{\frac{1-\sigma}{\sigma}} \right\}^{\frac{\sigma}{\sigma-1}} \quad (1)$$

The budget constraint is given by:

$$\sum_i p_{ij}\, c_{ij} = E_j \ (2)$$

The equation shows that total spending is the sum of spending of products from different origins, including shipping costs. In the equation $p_{ij} = p_i t_{ij}$, where t_{ij} denotes bilateral trade cost that also is defined as iceberg cost. Therefore, each country must ship $t_{ij} \geq 1$ units to deliver one unit to the other country. This model assumes variable trade costs, but it is important to consider that bilateral costs can be fixed as well for example costs related to the certificates for product standards etc. Next equation illustrates the expenditures of shipping goods from one destination to another, where X_{ij} represents the trade flows from country *i* to country *j* and where P_j denotes CES consumer price index:

$$X_{ij} = \left(\frac{a_i p_i t_{ij}}{P_j}\right)^{(1-\sigma)} E_j \ (3) \qquad P_j = \left[\sum_i (a_i p_i t_{ij})^{1-\sigma}\right]^{\frac{1}{1-\sigma}} \ (4)$$

Given the assumption that elasticity is greater than 1, several intuitive predictions can be developed from equations above. Firstly, given that everything else is kept constant, countries with higher GDP consume more of each variety from other countries. Secondly, low factory-gate price and low bilateral trade cost between countries will promote trade. Thirdly, the more expensive products from one country, the more will consumers choose to consume goods from a country with similar cheaper goods (including bilateral trade cost).

Finally structural gravity model can be derived in fifth equation with consideration to market clearance for goods from each origin:

$$Y_i = \sum_j \left(\frac{a_i p_i t_{ij}}{P_j}\right)^{1-\sigma} E_j \ (5)$$

The final equation can be further derived into the structural gravity system that shows the value of bilateral trade between countries *i* and *j*:

$$X_{ij} = \frac{Y_i E_j}{Y} \left(\frac{t_{ij}}{\pi_i P_j}\right)^{1-\sigma} \ (6)$$

Yotov et al. (2016) explains that using this equation and holding expenditures of country *j* and income of country *i* fixed, will affect the multilateral resistance. This makes it possible to develop equations seven and eight below that describe inward multilateral resistances. Equation seven denotes CES consumer price index in country *i* and equation eight denotes CES consumer price index in country *j*. Equation six, seven and eight form together the conditional general equilibrium:

$$\pi_i^{1-\sigma} = \sum_j \left(\frac{t_{ij}}{P_j}\right)^{1-\sigma} \frac{E_j}{Y} \quad (7) \qquad P_j^{1-\sigma} = \sum_i \left(\frac{t_{ij}}{\pi_i}\right)^{1-\sigma} \frac{Y_i}{Y} \quad (8)$$

The Gravity model is useful for this study because it generates a controllable framework for trade policy analysis in a multi-country environment. Yotov, et al (2016) argues that with the help of the Gravity model it is possible to explain variation in bilateral trade in a realistic way. The model is very intuitive and has good predictive power. The Gravity model also has a flexible structure and a solid theoretical foundation.

3.1.1 Size versus trade cost

Yotov et. al (2016) explained that equation (1) to (8) that represents trade flows, can be decomposed into two terms: a size term and a trade cost term. Size term is denoted as $\frac{YiE_j}{Y}$ and trade cost term is noted as $(\frac{t_{ij}}{(\pi_i P_j)})^{1-\sigma}$. Size term gives us valuable information regarding bilateral trade. It shows what trade would look like if there were no trade costs and no home bias. It is expected that larger and richer economies will export more to all destinations and import more from other destinations. Further, that trade flows will be larger the more similar the size and economy the countries have. Trade cost term illustrates total effects of trade cost and there are three main components: bilateral trade cost between partners *i* and *j*, (t_{ij}) that usually correspond to geographical and policy variables like tariffs and RTA, P_j that illustrates inward multilateral resistance and π_i that represents outward multilateral resistances.

3.1.2 Challenges and solutions for estimating structural gravity model

Gravity model fits great to this study; however, it is important to consider weaknesses of the estimations. Yotov et. al (2016) presents eight important challenges related to the econometric techniques for estimating the Gravity model. First challenge is multilateral resistance that is used in trade cost terms denoted by πiPi that cannot be directly observed. Second challenge is zero trade flows which cannot be estimated with OLS. The problem occurs when trade is transformed into an algorithm and observations with zero trade flows are simply dropped from the estimation. Zero trade flows challenge causes the most damage when studying the service sector with highly specialized products. Third challenge that is presented by Yotov et. al (2016) is that the trade flow data often contains heteroscedasticity. Authors explain that heteroscedasticity can result in biased and inconsistent estimations if using a log-linear form of estimation.

Another challenge that is mentioned is that correct estimation of bilateral trade cost is of utmost importance for the analysis of both partial and general equilibrium. Further, trade policy variables like RTA are endogenous because of possible correlation with other unobserved variables like trade costs and variables may be afflicted by reversed causality. Countries would presumably enter RTAs with countries that they trade the most with. The sixth challenge raised is non-discriminatory trade policy in form of subsidies and MFN tariffs, that will be absorbed by the exporter-time and by the importer-time fixed effects. The latter two are necessary to control for multilateral resistance. Furthermore, the adjustment to trade policy changes is brought up as another challenge. That is because studied variables cannot be adjusted in a short period of time, it takes at least three to four years for adjustments to show any effect on the data. The final challenge that is addressed is disaggregated data.

Even though there are many challenges with the gravity model, the model can capture all the complexity of bilateral trade and can enable explanation of most of the trade flows between the countries. In addition, several researchers including Yotov et. al (2016) have proposed solutions to the above challenges. These proposals have been considered in the construction of models that were later used in the study's regressions. More focus on solutions is presented under sections for the data and the empirical model.

3.2 Krugman's intra-industry trade theory

Paul Krugman's model explains intra-industry trade between similar countries with help of two factors, increasing returns to scale technologies that imply specialization and love-of-variety preferences (Krugman 1980). The main idea of Krugman's model is that trade in industry is driven by economies of scale and with the help of product differentiation. Trade allows countries to specialize in a limited production range and thus reap the benefits of increasing returns, without reducing the amount of goods available for consumption. Insights from the models are that trade can generate import variety gains and that a large home market of one specific good will generate more exports of that good.

First assumption of the basic model is that there are many potential goods, and that demand for those goods is symmetric. Further, it is assumed that all individuals have the same utility function in each economy. In the first function *c* stands for consumption and *i* denotes destination country:

(1) $U = \sum_i c_i^{\theta} \qquad 0 < \theta < 1$

Further, the model assumes economies of scale in production and differentiation is possible with minimum cost. In the assumption there is only one factor of production and that is labor and the cost function for all goods will be the same. In the function, *l* stands for labor, and *x* is output of the good.

(2) $\mathrm{l}_i = \alpha + \beta x_i \quad \alpha, \beta > 0 \quad i = 1, \dots, n$

Thirdly, the sum of individual consumptions will equal output of each good and the individuals can be identified with workers:

(3) $x_i = Lc_i \quad i = 1, \dots, n$

Fourth assumption is that the full employment:

(4) $L = \sum_{i=1}^{n} (\alpha + \beta x_i)$

Fifth assumption is profit maximization and free entry. Chamberlinian monopolistic competition is used in the model, where each firm has monopoly power and profits are driven to zero. Trade between two imperfectly competitive economies of this kind will generate increasing returns, produce trade and gains from trade.

Further, utility function (1) is budget constrained where p is the price of the good and $\boldsymbol{\lambda}$ is the shadow price on the budget constraint.

(5) $\theta c_i^{\theta-1} = \lambda p_i \quad i = 1, \dots, n$

Equation six is the rearrangement of the equation five to show the demand curve for the good in country *i* and implies that each firm has an elasticity $1/(1-\theta)$. Therefore, profit maximizing price can be illustrated in equation seven, where *w* is the wage rate.

(6) $p_i = \theta\lambda^{-1}\,(x_i/L)^{\theta-1} \quad i = 1, \dots, n$

(7) $p_i = \theta^{-1}\beta w \quad i = 1, \dots, n$

Equation eight illustrates the profits of the firms under given assumptions. Given that profits are positive, new firms will enter. This will lead to rise in the marginal utility of income and profits will be driven to zero. Equation nine illustrates the output of a representative firm. Finally given the assumption of full employment, the number of goods produced is illustrated in equation ten.

(8) $\pi_i = px_i - \{\alpha + \beta x_i\}w \quad i = 1, \dots, n$

(9) $x_i = \frac{\alpha}{\frac{p}{w-\beta}} = \frac{\alpha\theta}{\beta(1-\theta)} \quad i = 1, \dots, n$

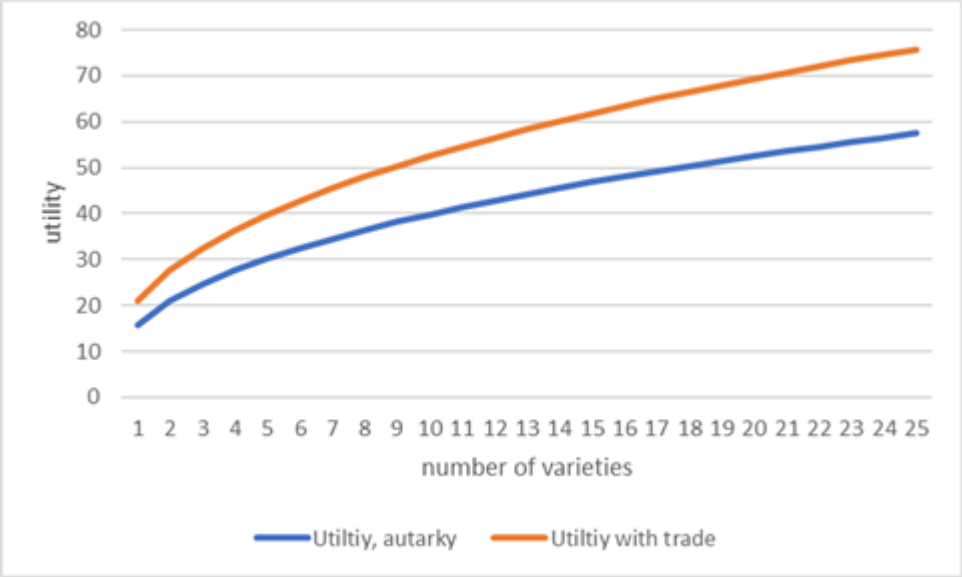
(10) $n = \frac{L}{\alpha+\beta x} = \frac{L(1-\theta)}{\alpha}$

Intra-industry trade between similar countries generates economic benefits because it allows employees and firms to learn and innovate on specific products—and, in many cases, to focus on certain areas of the value chain. Economies of scale are a second major reason why intra-industry trade between similar countries generates economic gains. Economies of scale refers to the fact that when output scale increases, average production costs decrease—at least to a point. International commerce allows customers to benefit from lower average manufacturing costs due to economies of scale while still having competition and diversity. Gains from trade according to Krugman are:

(11) $U^f = 2n(x/2)^\theta = 2^{1-\theta}nx^\theta$

$U^f > U^a \; if \; 2^{1-\theta} > 1$

This is always the case when $0 < \theta < 1$ and consumers love variety.



The figure above illustrates the utility given the autarky, where $U^a = nx^\theta$ versus utility with trade from equation eleven.

4. Data

The study is based on panel data from EU countries, EFTA countries (Norway, Iceland, Switzerland, and Liechtenstein), as well as other major players included in the G20. G20 consist of twenty global leaders that represent 90% of global GDP, 80% of global trade and 66% of the world's population (European commission u.å). The study examines a total of 48 countries, where 27 of them are EU members and 16 of them are G20 members. Panel data is used for the estimation of structural gravity due to better estimation efficiency (Yotov et al. 2016). Panel data also enables the pair-fixed-effects that helps to solve the challenge of endogeneity in the variables. Panel data allows efficient pair-fixed effects estimations of time-invariant bilateral trade costs. The EEA was established in 1994. Therefore, the used period is 1986-2002. To solve the problem with adjustments in bilateral trade flows, the research is using four-year intervals; 1986, 1990, 1994, 1998 and 2002. Data is retrieved from CEPII Gravity Database which contains intra-national and international trade.

Beside the variable included in the Gravity model, the report also includes variables RTA, both_EU, both_EEA, one_EU, and one_EEA. RTA in this case refers to the regional trade agreements between studied countries. RTA's purpose is to encourage trade between its members with the help of zero internal tariffs and occasionally common internal rules. However, external tariffs may differ between the countries. The variable both_EU represents the additional effect of the free trade agreement when both countries are members of the EU. The variable both_EEA represents the effect on trade when both countries are members of the EEA agreement. It is interesting to see how each agreement affects trade between countries and how they overlap in the data. The dependent variable in the research is a logarithm of the manufactured trade. The reason that manufactured trade is used instead of all trade is to try to avoid the effects of oil exports from Norway, since oil exports are to a small or no degree driven by trade agreements.

4.1 Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Distance (km)	9268	5922	4968	8	19539
Contiguity	9268	0.048	0.214	0	1
Common language	9268	0.066	0.248	0	1
Common colonizer post 1945	9268	0.005	0.072	0	1
Origin GDP, millions of US$	9522	57000	134000	1435	110000
Destination GDP, millions of US$	9522	57000	134000	1435	110000
Origin is an EU member	9844	0.285	0.451	0	1
Destination is an EU member	9844	0.565	0.496	0	1
RTA	9268	0.305	0.460	0	1
Total Trade flow, millions of USD	3957	2079	8616	0.469	20400
Manufactured Trade flow, millions of USD	3957	1890	7988	0.469	16900
One country is a member of EEA	9580	0.529	0.469	0	1
Both countries are members of EEA	9580	0.162	0.329	0	1
One country is a member of EU	9236	0.327	0.499	0	1
Both countries are members of EU	9236	0.123	0.368	0	1

Source: CEPII Gravity Database

5. Empirical Model

Yotov et. al (2016) points out that intra-national trade data should be used when estimating structural gravity because of the consistency and because it identifies and estimates the effects of non-discriminatory trade policies. It is also able to measure the effect of distance on bilateral trade as well as the effects of globalization. Exporter-time and importer-time fixed effects are included in the model with purpose to control for the unobservable multilateral resistances. Pair fixed effects are used in the estimations because they solve a problem with endogeneity, and it also makes it possible to see the full effect on all time-invariant bilateral trade costs. Models that are used are modified from Yotov et. al (2016) original models by adding extra variables both_EU, one_EU, both_EEA and one_EEA, which are described below. Subscripts *i, j* and *t* are used in the models, where *i* stands for the origin country, *j* denotes destination country and *t* stands for time.

5.1 Regression model

The first table is based on both ordinary least squares (OLS) and Poisson Pseudo Maximum Likelihood (PPML) estimates. OLS is a method for estimating the studied parameters in a linear regression model, while PPML is used for estimating generalized linear gravity models. Since OLS may lead to severe biases in the estimations, and fails to account for the multilateral resistance, time fixed effect is used in the regressions with OLS estimates. All regressions also include exporter-time and importer-time fixed effects. Exporter-time fixed effects are included to account for the outward multilateral resistance and importer-time fixed effects are used to account for the inward multilateral resistance. The dependent variable in the first table is a logarithm of the manufactured trade.

The variables used in the table are based on the traditional gravity theory such as, bilateral manufactured trade (Y), distance (DIST), contiguity (CNTG), language (LANG), colony (CLNY), origin GDP, destination GDP and regional trade agreements (RTA). Since GDP origin and GDP destination are collinear with the country-year fixed effects, variables are dropped from the regressions. To generate a greater insight for the EEA agreement, Yotovs model is modified with additional dummy variables. The included variables are both_EU that represent that both origin and destination country are part of the EU and both_EEA where both origin and destination country are part of the EEA agreement. Variables one_EU and

one_EEA denote that only one of the parties is involved in each agreement. One_EEA captures possible trade diversion effects and both_EEA captures trade creation effects.

Model (1) is presented below:

$$lnY_{ij,t} = \pi_{i,t} + \chi_{j,t} + \beta_1 lnDST_{ij} + \beta_2 CNTG_{ij} + \beta_3 LANG_{ij} + \beta_4 CLNY_{ij} + \beta_5 RTA_{ij,t} + \beta_6 both\_EU_{ij,t} + \varepsilon_{ij,t} \ (1)$$

In model (2), variable both_EEA is added to study the additional effect of the agreement.

$$lnY_{ij,t} = \pi_{i,t} + \chi_{j,t} + \beta_1 lnDST_{ij} + \beta_2 CNTG_{ij} + \beta_3 LANG_{ij} + \beta_4 CLNY_{ij} + \beta_5 RTA_{ij,t} + \beta_6 both\_EU_{ij,t} + \beta_7 both\_EEA_{ij,t} + \varepsilon_{ij,t} \ (2)$$

Model (3) also includes variables one_EU and one_EEA.

$$lnY_{ij,t} = \pi_{i,t} + \chi_{j,t} + \beta_1 lnDST_{ij} + \beta_2 CNTG_{ij} + \beta_3 LANG_{ij} + \beta_4 CLNY_{ij} + \beta_5 RTA_{ij,t} + \beta_6 both\_EU_{ij,t} + \beta_7 both\_EEA_{ij,t} + \beta_8 one\_EU_{ij,t} + \beta_9 one\_EEA_{ij,t} + \varepsilon_{ij,t} \ (3)$$

Further, the models are modified in multiplicative form with PPML estimates included in the model. PPML helps to solve the problem with heteroscedasticity and the problem with zero trade flows. This is represented in regressions (4)-(6).

$$Y_{ij,t} = exp\big[\pi_{i,t} + \chi_{j,t} + \beta_1 lnDST_{ij} + \beta_2 CNTG_{ij} + \beta_3 LANG_{ij} + \beta_4 CLNY_{ij} + \beta_5 RTA_{ij,t} + \beta_6 both\_EU_{ij,t} + \big] + \varepsilon ij, t \ (4)$$

$$Y_{ij,t} = exp\big[\pi_{i,t} + \chi_{j,t} + \beta_1 lnDST_{ij} + \beta_2 CNTG_{ij} + \beta_3 LANG_{ij} + \beta_4 CLNY_{ij} + \beta_5 RTA_{ij,t} + \beta_6 both\_EU_{ij,t} + \beta_7 both\_EEA_{ij,t}\big] + \varepsilon ij, t \ (5)$$

$$Y_{ij,t} = exp\big[\pi_{i,t} + \chi_{j,t} + \beta_1 lnDST_{ij} + \beta_2 CNTG_{ij} + \beta_3 LANG_{ij} + \beta_4 CLNY_{ij} + \beta_5 RTA_{ij,t} + \beta_6 both\_EU_{ij,t} + \beta_7 both\_EEA_{ij,t} + \ \beta_8 one\_EU_{ij,t} + \beta_9 one\_EEA_{ij,t}\big] + \varepsilon ij, t \ (6)$$

The second table is intended to demonstrate the effects of the EEA agreement on trade for all members. An experiment is performed to look at the general equilibrium impacts of regional trade agreements, specifically the effects of the EEA agreement. This table presents three useful additions. Unlike the prior application, this experiment uses the panel dimension of the dataset to identify the effects of EEA and to employ pair fixed effects to capture the influence of all time-invariant trade costs. In addition, the program uses Yotov et al. (2016) two-stage technique to recover missing bilateral trade costs. It shows how the GEPPML procedure's first stage can be implemented as a restricted model with an external trade cost vector.

To generate estimates of bilateral trade costs, including an assessment of the average effects of all RTAs, the study begins by specifying the panel version of the empirical gravity model as follows:

$$Y_{ij,t} = exp\left[\pi_{i,t} + \chi_{j,t} + \mu_{ij} + \beta_1 EEA_{ij,t}\right] x\ \varepsilon_{ij,t} \quad (7)$$

$EEA_{ij,t}$ denotes that the two countries are members of the agreement at a given time (t). As previously stated, PPML is employed as an estimation method since it aids in the resolution of many issues associated with gravity estimates, such as heteroskedasticity and zero trade flows. Exporter-time fixed effects and importer-time fixed effects are included in the regression. To address any endogeneity concerns with the RTA dummy variable and to adjust for all possible time-invariant trade costs at the bilateral level, the pair fixed effects are also incorporated.

The GEPPML method was implemented to investigate the impacts of withdrawing the EEA agreement. To compute the baseline indices of interest, the first phase of the GEPPML process provides estimates of trade costs and trade elasticities in the baseline scenario. The scenario that mimics the hypothetical disappearance of all international borders in the world is defined in the second step of the GEPPML method. The values of the counterfactual indexes of interest in the "conditional" and "full endowment" general equilibrium scenarios of removing international boundaries are delivered in the third step of the GEPPML method. The gravity equation is computed under the assumption that the EEA agreement will never be implemented. Conditional general equilibrium was calculated using the econometric gravity specification for 1994, the year the EEA agreement went into effect.

$$Y_{ij} = exp\left[\pi_i^{CFL} + \chi_j^{CFL} + \hat{t}_{ij}^{1-\sigma} + \hat{\beta}_1 EEA_{ij}^{CFL}\right] x\ \varepsilon_{ij}^{CFL} \quad (8)$$

Full endowment general equilibrium effects are the final step. This step implements the four-stage iterative technique that allows endogenous factory-gate pricing, income, expenditure, and trade to respond to the counterfactual shock, resulting in "full endowment general equilibrium" consequences from the absence of international borders.

6. Results

Table 1: Traditional Gravity Estimates

	FES (1)	FES (2)	FES (3)	PPML (4)	PPML (5)	PPML (6)
Log distance	-1.317 (0.045) **	-1.325 (0.045) **	-1.325 (0.045) **	-0.701 (0.050) **	-0.695 (0.050) **	-0.695 (0.050) **
Contiguity	0.327 (0.108) **	0.318 (0.108) **	0.318 (0.108) **	0.481 (0.071) **	0.488 (0.071) **	0.488 (0.071) **
Language	0.138 (0.096)	0.136 (0.096)	0.136 (0.096)	0.094 (0.073)	0.098 (0.073)	0.098 (0.073)
Colony	0.994 (0.486) *	0.978 (0.482) *	0.978 (0.482) *	1.556 (0.306) **	1.571 (0.307) **	1.571 (0.307) **
RTA	0.235 (0.057) **	0.257 (0.057) **	0.257 (0.057) **	0.666 (0.086) **	0.636 (0.087) **	0.636 (0.087) **
Both countries in EU	-0.559 (0.076) **	-0.343 (0.144) *	-0.063 (0.292)	-0.083 (0.107)	-0.467 (0.145) **	-0.467 (0.145) **
Both countries in EEA		-0.274 (0.155) *	-0.306 (0.270) **		0.442 (0.167) **	0.442 (0.167) **
One country in EU			0.140 (0.168)			0.000 (.)
One country in EEA			-0.016 (0.160) **			0.000 (.)
Observations	3957	3957	3957	3957	3957	3957
R-squared/Pseudo R-squared	0.892	0.892	0.892	0.902	0.902	0.902
Exporter-time fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Importer-time fixed effect	Yes	Yes	Yes	Yes	Yes	Yes

Notes: All estimates are obtained with data for the years 1986, 1990, 1994, 1998 and 2002. Column (1)-(3) uses OLS estimates with importer-time and exporter-time fixed effects, whose estimates are omitted for brevity, to control for multilateral resistances. Column (4)-(6) employs the PPML estimator. Standard errors are reported in parentheses and are clustered by country pair. Significance $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$. Dependent variable: log of manufactured trade.

Column (1) in table 1 reports OLS estimates with fixed effects of the traditional gravity variables, RTA, and dummy variables for both countries being in the EU. Exporter- and importer-time fixed effects are used in the regression. One percent increase in distance reduces trade by 1.32 percent. Further the results indicate that countries that share a common border trade 39[1] percent more with each other. Both variables are statistically significant on one percent significance level. Countries that speak the same language, trade 15 percent more with each other, however the variable is not statistically significant. Further, countries with common colony ties are indicated to trade 169 percent more with each other and the variable is statistically significant on a five percent significance level. When countries are members of the same regional trade agreement (RTA), they are expected to trade 27 percent more with each other compared to if they were not members of same RTA. Since the EU is an RTA in addition to being a customs union and a common market, the coefficient on both EU is interpreted as the additional gain in trade from being EU members – over and above being members of the same free trade agreement. The coefficient is negative and indicate that countries that are members of EU, trade 43 percent less with each other. The variables RTA and both countries in EU are statistically significant at one percent significance level.

In column (2) an additional variable that displays that both countries are members of the EEA is included in the regression. The variable is interpreted as an additional effect of the RTA. The effect is negative and the estimate reports that the bilateral trade decreases by 24 percent due to the additional effect to RTA if both countries are member of EEA. However, the negative additional effect of being both members in the EU decreases from 43 percent to 29 percent in relation to the previous column. In column (3) two additional variables are included in the regression, one country in the EU and one country in the EEA. The difference is large, since the negative additional effect of being an EU member decreases to only six percent and additional negative effect of being a member of EEA increases to 27 percent. The effect of one country being a member in the EU is positive and shows that bilateral trade increases by 15 percent if one of the countries is in the EU, while the effect of one country being an EEA member has a negative two percent effect on trade. The positive effect of one country EU indicates that studied countries trade more with countries outside the EU. The negative effect of one country EEA indicates that countries trade less with countries outside the EEA.

[1] (exp(0.327)-1)=0.39. The effects for the rest of dummy variables are interpreted in the same way.

Since PPML is known for efficiency and accuracy, columns (4) to (6) are generated with PPML estimates. As the gravity model predicts, distance has a negative effect on the trade. Column (4) shows that one percent increase in distance leads to a 0.7 percent decrease in trade. Further, the regression shows that when countries share a common border it leads to a 62 percent increase in trade between countries. The coefficients differ from the previous three columns. Common language between trading countries results in an increase by nine percent in bilateral trade. However, the variable common language is not statistically significant. Countries with colonial ties tend to trade 376 percent more with each other. RTA between countries results in an increase by 95 percent. Both colony and RTA are statistically significant at one percent significance level. The additional effect on trade from being EU members – over and above being members of the same FTA is slightly negative. However, the effect is not statistically significantly different from zero.

In column (5) the additional effect of both countries being a member of EEA is included in the regression. The variable of both countries in the EU now has a 37 percent negative effect. On the contrary, the additional effect of both countries being in the EEA is positive by 55 percent and indicates that countries tend to trade more with each other when both are EEA members. All variables except for language are statistically significant.

Column (6) shows that one percent increase in distance leads to a 0.7 percent decrease in trade. Further, countries with common border are indicated to trade 62 percent more with each other and common language between countries leads to an increase in trade by nine percent. Common colony ties tend to increase trade by 376 percent and RTA between countries leads to 90 percent increase in trade. Additional effect of both countries being EU member is a decrease in trade by 37 percent. However, the additional effect to RTA by being a member of EEA showed an increase on trade by 55 percent. Variable one_EU and one_EEA are dropped because of collinearity.

The R-squared for the three first regressions are 89, this indicates that 89 percent of the variation in bilateral trade can be explained by the independent variables in the model. The Pseudo R-squared for model (4)-(6) is 90 percent, a bit larger than in the earlier regressions.

Table 2: General equilibrium percentage effects of the EEA agreement compared to RTA

Country	Exports (1)	Δ Exports (2)	Δ Price (3)	Δ IMRs (4)	Δ Real GDP (5)
Argentina	-0.01710	-0.01835	0.00059	0.00061	-0.00002
Australia	-0.01791	-0.01929	0.00045	0.00052	-0.00007
Austria	-0.00877	-0.00636	0.00209	0.00219	-0.00010
Belgium	-0.00775	-0.00518	0.00188	0.00198	-0.00010
Brazil	-0.00699	-0.00822	-0.00114	-0.00109	-0.00004
Bulgaria	0.97406	0.97341	0.17920	0.12810	0.05135
Canada	-0.00446	-0.00520	-0.00078	-0.00074	-0.00004
CZ Republic	0.00013	0.00489	-0.00442	0.00016	-0.00457
China	-0.00480	-0.00607	-0.00157	-0.00154	-0.00003
Croatia	1.26200	1.30548	-0.00426	0.00002	-0.00428
Cyprus	-0.01587	-0.01715	0.00027	0.00056	-0.00029
Denmark	-0.00690	-0.00439	0.00186	0.00195	-0.00009
Estonia	0.00013	0.00474	-0.00426	0.00002	-0.00428
Finland	-0.00263	-0.00393	-0.00192	-0.00184	-0.00008
France	-0.00830	-0.00579	0.00206	0.00208	-0.00003
Germany	-0.00004	0.00572	0.00120	-0.00609	0.00729
Greece	0.00000	0.00000	0.00000	0.00000	0.00000
Great Britain	-0.01255	-0.01006	0.00269	0.00271	-0.00002
Hungary	1.43449	1.43484	0.10155	0.07916	0.02247
Iceland	-0.00893	-0.00654	0.00214	0.00248	-0.00034
India	-0.00900	-0.01013	-0.00063	-0.00056	-0.00006
Indonesia	-0.01082	-0.01194	-0.00026	-0.00018	-0.00008
Ireland	-0.00301	-0.00050	0.00122	0.00131	-0.00009
Italy	-0.00201	0.00051	0.00105	0.00107	-0.00002
Japan	-0.00071	-0.00196	-0.00224	-0.00224	-0.00001
Korea	-0.01209	-0.01332	-0.00029	-0.00025	-0.00004
Latvia	-0.00001	-0.00710	0.00000	0.00000	0.00000
Liechtenstein	-0.02584	0.00000	0.00000	0.00000	0.00000
Lithuania	-0.00001	-0.00590	0.00000	0.00000	0.00000
Luxembourg	0.00200	0.00000	0.00000	0.00000	0.00000
Malta	-0.01279	-0.01407	-0.00024	0.00021	-0.00044
Mexico	-0.01150	-0.01230	0.00033	0.00038	-0.00005
Netherlands	-0.01057	-0.00807	0.00244	0.00249	-0.00005
New Zealand	0.00012	0.00481	-0.00426	0.00000	-0.00426
Norway	4.99240	4.93430	-0.21413	-0.23652	0.02291
Poland	1.45464	1.44735	0.10019	0.08519	0.01508
Portugal	-0.01265	-0.01015	0.00279	0.00286	-0.00007
Romania	-0.00001	-0.00607	0.00000	0.00000	0.00000
Russia	0.00013	0.00604	0.00000	0.00000	0.00000
Saudi Arabia	0.00011	0.00260	0.00000	0.00000	0.00000
Slovakia	0.00013	0.00320	0.00000	0.00000	0.00000
Slovenia	-0.00001	0.00834	0.00000	0.00000	0.00000
South Africa	-0.01392	-0.01522	-0.00008	0.00000	-0.00008
Spain	-0.01168	-0.00918	0.00260	0.00264	-0.00004
Sweden	-0.00175	0.00065	0.00095	0.00100	-0.00005
Switzerland	-0.00632	-0.00392	0.00170	0.00174	-0.00004
Turkey	-0.03723	-0.04426	-0.00243	-0.00218	-0.00025
USA	-0.02325	-0.02512	0.00062	0.00062	-0.00001

Source: Authors' calculations. Notes: Column (1) shows conditional GE and (2) -(5) show full endowment equilibrium

Table 2 reports the results of the European Economic Area Agreement counterfactual analysis. Column (1) reports the conditional general equilibrium scenario, where both the direct and indirect trade costs changes are considered, and the GDP is held constant. The columns (2) to (5) show the full endowment general equilibrium scenario The general equilibrium income effects are additionally considered in these four columns. Column (2) represents the average percentage changes in a country's total exports. The average changes in producer price are represented in column (3) and the average percentage changes in the inward multilateral resistances are shown in column (4). The last column (5) represents a country's welfare. This is measured as the average percentage changes in real GDP.

The results in regression (1) reports that when examining the conditional general equilibrium scenario, the countries with an increase in exports due to the EEA agreement are mainly members of the agreement. The increase is largest in Bulgaria, Croatia, Hungary, Norway, and Poland ranging between 1 and 5 percent of their respective total exports. Norway has the largest increase in export, 5 percent. The rest of countries have either a slight increase or a decrease in export. The full endowment general equilibrium effects of EEA agreement on exports in model (2) are similar to the results in the previous regression. Bulgaria, Croatia, Hungary, Norway, and Poland still have the largest increase in exports. Results in model (3) indicate that the average change in price decreases by 0.24 percent in Norway because of EEA agreement. Due to lower producer prices, many non-EEA members' producers incur negative full endowment general equilibrium impacts, while consumers in some non-member countries benefit from lower prices. The fall in producer costs in many non-member nations, as well as increases in efficiency in EEA member countries, could be beneficial for the members of the agreement.

The estimates in regression (4) indicate that the consumers in Norway have positive effects because of the lower inward multilateral resistances due to the EEA agreement. This indicates higher factory-prices for producers in relation to the effects for consumers in the reference country New Zealand. The full endowment welfare effects due to the EEA agreement are reported in regression (5) as average percentage changes in real GDP. The effect of real GDP is positive in Bulgaria, Hungary, Germany, Norway, and Poland ranging from 0.01 to 0.05 percent of their total real GDP. The effect for the rest of the countries is slightly negative or null. Overall, the results provided and discussed above are comparable to those from existing related studies and theory.

Table 3. Expectations versus results

Variables	Expectations	Results
Distance	Negative	Negative
Contiguity	Positive	Positive
Language	Positive	Positive
Colony	Positive	Positive
RTA	Positive	Positive
EU	Positive	Negative
EEA	Positive	Positive

Source: Yotov et al. (2016).

The expectations are based on the theory framework and previous studies. The Gravity model indicates that the greater distance between two countries, the less they trade with each other (Yotov et al. 2016). Therefore, distance is assumed to have a negative impact on trade because of the higher iceberg transport cost. Contiguity, common language, and colonial ties are predicted to have a positive effect on trade. These three factors can implicate common history, origin, culture, and traditions. This could make countries more likely to trade with each other. It is also assumed in the gravity model that larger economies are more likely inclined to export and import more than the smaller economies. However, GDP was dropped because of collinearity.

According to Krugman (1980), the countries will benefit from RTA since each country will have the opportunity to specialize in one differentiated product and be able to export the product to all other countries. Specialization in goods will lead to economies of scale and lower costs. Given consumers generally prefer variety, all parties involved in the free trade agreement will benefit from it. Most results are similar to the expectations. However, it was surprising that the additional effect of the free trade agreement between European countries, of being a member of the EU was negative. This variable was expected to be positively affected by the EEA agreement.

7. Analysis

As expected from the gravity model, distance has a negative impact on bilateral trade. Other traditional variables such as contiguity, common language, and colonial ties showed a significant increase in bilateral trade in all regressions. As Yotov et. al (2016) explained, countries with larger economies tend to both import and export more in absolute numbers. Further RTA showed a large significant effect on trade between countries. This is also expected due to predictions that regional trade agreements lead to an increase in trade and Krugman model points out the benefits of trade because of the economies of scale and love of variety. However, the additional effect of both countries being members of the EU and the EEA differ in the regressions. Since PPML is known for generating most efficient and unbiased results, analysis of additional variables is based on the result from column (4) to (6) in table 1. PPML also helps to solve many challenges of the gravity estimates such as heteroskedasticity and zero trade flows.

The results indicates that there is no significant additional effect on trade of EU membership compared to RTAs. However, the effect is negative compared to EEA based on the PPML regressions. The variable of both countries in the EU showed a negative additional effect to RTA, approximately minus 37 percent. This means that EU members tend to trade less with each other. Possible explanation for the negative results is that the integration beyond RTA and EEA is about free movement of workers, capital, data, and a common regulatory framework that triggers firms, people, and services to cross borders. Firms are expected to be more likely to set up production in another EU country instead of exporting to them. On the contrary, both countries in the EEA showed significant positive effects on bilateral trade. The positive effects indicate that when both countries are EEA members, they tend to trade more with each other. An interesting highlight of the study is that there are no additional trade effects of joining the EU compared to being a member of EEA.

In table 2 the effect of EEA is studied particularly. Results show that Bulgaria, Croatia, Hungary, Norway, and Poland have the largest increase in export due to the EEA agreement. These countries benefited most by the agreement. Because of the EEA agreement Norway has an approximately 5 percent higher export compared to the scenario where EEA is removed. Results indicate that Norway has benefits from the agreement. The EEA membership also led to a 0.02 percent increase in real GDP in Norway.

The main insight from results in both tables is that countries do benefit from trade agreements. Results indicate that countries benefit from the FTA in the EU and the EEA in terms of increased bilateral trade between countries. That can partly be explained by Krugman's theory where he uses two elements to explain intra-industry trade between similar countries: growing returns to scale technologies, which suggest specialization, and demand for variety. It is also important to highlight that manufactured trade was analyzed in the research which are the products characterized by product differentiation. The key assumption of Krugman's model is that industrial commerce is fueled by economies of scale and product diversification. Trade enables countries to specialize in a narrow range of products depending on the size of the economy, and therefore reap the benefits of higher yields without lowering the number of items accessible for consumption. Krugman's theory explains why countries benefit from trading with each other and free trade agreements between EEA countries make it more attractive for countries to trade with members within the agreement. Further as Yotov et. al (2016) explained that a country with a low factory-gate price and a low bilateral trade cost across countries is the optimum combination for bilateral trade.

8. Conclusions

The main purpose of the study was to examine whether the free trade agreement between the EU and Norway had a positive impact on bilateral trade between the countries within the agreement. Our study showed that countries within the EEA agreement tend to trade more with each other than with countries outside the agreement. Norway has the largest increase in export due to the EEA agreement, five percent. The EEA membership is also associated with a 0.02 percent increase in real GDP in Norway. This indicates that Norway has benefits of being a member of the EEA agreement and should not leave the agreement.

This study also highlights other factors that have affected trade between studied countries. The main results in the report indicate that distance has a negative impact on bilateral trade. Other traditional variables such as contiguity, common language and colonial ties showed a significant positive effect on bilateral trade. This is also consistent with the gravity model. Finally, we examined the effect on trade if the agreement between EU and Norway was removed. Study have shown that Norway's export has increased by five percent due to the trade agreement. The result indicates that if the agreement was removed it would affect Norway's bilateral trade negative.

8.1 Further research

First, we believe that our report would be lifted if all trade was examined and not just manufactured trade. However, it is still important to exclude oil from observation. Since oil exports are to a small or no degree driven by trade agreements. In this way, one could then, for example, include the fishing industry in the study, which is very large in Norway. In addition, it would be good if one managed to include origin and destination GDP in the regressions. That is because GDP is one of the important factors in the gravity model that explains the changes in trade to a great extent. Furthermore, the models could be further developed with the Eaton Kortum model to get more insights on how productivity differs across goods in each country and further to study how that affects trade. Finally, it would be interesting to see how Switzerland, Lichtenstein and Iceland are affected by the EEA. The problem is that there are very few observations for these countries and these economies are very small. Therefore, observation results in extreme values and may lead to biased result. It would also be interesting to examine the overall effect of joining the EEA. All economic factors, as well as other issues around, for example, emissions, joint decisions, and regulations.

8.2 Policy suggestions

As there is a debate in Norway right now about leaving the EEA, it was interesting to observe the actual effect of the agreement. The study has shown that Norway benefits from being part of the EEA due to several different factors. First, the additional effect of both countries being members of the EEA studied in table one showed an increase in bilateral trade by approximately 55 percent and the study has shown that members of the EEA tend to trade more with each other. Secondly, the second table showed that the effect of being a member of EEA for Norway is five percent higher than in counterfactual scenario where the agreement is removed. We think that Norway should consider the benefits of trade due to the EEA agreement. However, there are other factors that can affect the willingness to leave the agreement, such as the freedom to decide entirely over one's own country. Our thesis showed the positive effect of the EEA precisely when examining bilateral trade and GDP. However, to decide whether Norway should remain in the agreement, it is important to consider other factors as well, not necessarily just the economic ones.

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