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The economic effects of EU sanctions imposed on Myanmar

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Abstract

The EU imposed targeted sanctions on Myanmar in 1996, which were later lifted in 2013. The sanctions were adopted because of the violation of human rights and the absence of democracy in the country. This study aims to examine the effects on Myanmar's exports, due to the sanctions. The paper takes two approaches. First, it applies a gravity model to distinguish if the sanctions had an impact on the EU's imports from Myanmar. Secondly, the paper entails a field study, which aims to capture any effects of the sanctions that a gravity model cannot observe. The estimation results suggest that the value of the EU imports from Myanmar is affected positively and significantly by the action of lifting the sanctions. However, the action of imposing sanctions did not have a significant effect. The key findings from the field study are that the industries that were mainly affected were the industries of garment manufacturing, timber, fishery and agricultural products. These industries were more affected indirectly than directly by the sanctions. This is because new requirements were developed during the time sanctions were imposed, which made it more difficult for companies to compete once the sanctions were lifted. There is also the indirect effect of a growing reputational risk for European businesses to trade with Myanmar, and the GSP removal that made it more difficult for Myanmar exporters to compete on the European market.

Keywords: Gravity model, field study, Myanmar, sanctions, EU

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All errors are my own.

List of abbreviations

CBI	Centre for the Promotion of Imports from developing countries
CFSP	The Common Foreign and Security Policy
CLM	Cambodia, Laos and Myanmar
EEAS	European Union External Action Service
ESCAP	Economic and Social Commission for Asia and the Pacific
EU	The European Union
GDP	Gross Domestic Product
GSP	Generalised Scheme of Preferences
ILO	International Labour Organization
ITC	International Trade Centre
LDC	Least Developed Countries
LIFT	Livelihoods and Food Security Trust Fund
MFPMF	Myanmar Forest Products Merchants Federation
MGMA	Myanmar Garment Manufacturing Association
MPEA	Myanmar Fishery Products Processors & Exporters Association
MTR	Multilateral Trade Resistance
NLD	National League for Democracy
NGO	Non-governmental Organisation
OLS	Ordinary Least Squares
PPLM	Poisson Pseudo-Maximum-Likelihood
UNSTATS	United Nations Statistics Division
WTO	World Trade Organization

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1 Introduction

Myanmar, formerly Burma, is the second largest country in Southeast Asia. Despite having a rich endowment of natural resources and agricultural potential, Myanmar is categorized amongst the Least Developed Countries (LDC) and one of the poorest nations in Asia (World Food Programme, 2016).

In the year of 1996, the European Union (EU) imposed various sanctions against Myanmar. The reasons behind these sanctions were to bring about a change in the lack of democracy and human rights in Myanmar. The sanctions aimed to address the previous military regime and entities associated with the regime. The measures were gradually extended because Myanmar failed to demonstrate any improvements (Government Offices of Sweden, 2015). Alongside the targeted sanctions, the EU also withdrew the Generalised Scheme of Preferences (GSP). This meant that Myanmar's exporters were obliged to pay the EU tariffs again (European Commission, 2013).

Nevertheless, since 2011, Myanmar has initiated vital political and economic reforms (World Bank, 2015). Thus, the EU decided to suspend the sanctions in 2012 and remove them in 2013, with the exception of an arms embargo (Government Offices of Sweden, 2015). The same year as sanctions were removed, the EU also decided to reinstall the GSP (European Commission, 2013).

As the EU sanctions were recently lifted, research on the economic effects of the sanctions is scarce. This study will try to contribute to the literature by linking the economic effects to sanctions on Myanmar. The purpose of this study is therefore to examine the effects on Myanmar's exports due to the imposing and lifting of sanctions. The paper will also try to answer if there is any variation in effects on diverse industries and if so: what are the effects and the underlying explanations of these?

In order to fill the research gap, two research methods will be approached. First, a gravity model based on panel data will be used to evaluate if the sanctions had any impact on the value of Myanmar's exports. Thus, the first part of the paper will take a quantitative approach. The regression results will further be used as an introduction to a field study. This study is considered required in order to answer how the actions of imposing and lifting the sanctions impacted the exports in detail, as it cannot be captured in a gravity model. The method in field will take a qualitative approach by conducting interviews with individuals who are considered experts in the subject and have experiences in certain key industries.

The estimation results suggest that the value of the EU imports from Myanmar is affected positively and significantly by the action of lifting the sanctions. However, having sanctions imposed did not have a significant effect. The field study implied that the largest impact of the sanctions was found in the garment manufacturing, fishery, agricultural and timber industries. The major effect in all industries was that during the time sanctions were imposed, new requirements were developed that prevented the industries from reaching their full potential after the lifting. This along with the GSP removal, reputational risk and the sanctions prohibiting financial transactions and such, impacted Myanmar's exports.

This study is limited to only look at the effects of the GSP removal and measures that are defined in the framework of the Common Foreign and Security Policy (CFSP)¹ and adopted as CFSP 'common positions'. To simplify, the EU sanctions imposed on Myanmar will henceforth refer to the targeted sanctions and the GSP removal if nothing else is being mentioned.

The remainder of this paper will be structured as follows: (1) previous research is discussed and summarised; (2) the second part presents the sanctions imposed by the EU; (3) the third part is a framework on how sanctions affect trade; (4) empirical strategy, introduction to the gravity model, its variables and estimation issues are presented; (5) the estimation results are presented; (6) the method used in field is described and the results are presented; (8) the final part presents a summary and conclusions, which ends with a bibliography and appendix.

2 Previous research

As using economic sanctions has become a more commonly used foreign policy tool, a larger amount of research have studied the determinants of sanction use, their impact, and if they are successful or not. This line of research has focused primarily on the effectiveness of sanctions with a prior focus on democratic and political change.

However, there are a few papers that have examined the economic impact of sanctions. These, and the following mentioned studies will be summaries in a table that can be observed in Appendix 1.

¹ CFSP is developed by the EU and aims to strengthen the EU's external ability to act through the development of civilian and military capabilities in conflict prevention and crisis management. More information about CFSP can be found on EEAS's website: http://eeas.europa.eu/cfsp/index_en.htm.

Frankel (1982), Irwin (2005), O'Rourke (2007) focus on the economic effects of sanctions imposed in the *sending* country. Frankel (1982), Irwin (2005) and O'Rourke (2007) suggest that the sanctions, in form of embargoes, implied a welfare loss of around four to eight per cent of GDP in the sending country. The findings of Hufbauer and Oegg (2003), however, indicate a much lower degree of loss in the US's GDP.

Other papers, such as Neuenkirch and Neumeier (2015) examine the economic impacts on *target* countries. The paper is very prominent as it studies the economic effects on 67 target countries and includes sanctions imposed both by the UN and the US. The results suggest that the imposition of UN sanctions lead to an aggregated decline in the target country's GDP per capita of 25.5 based on a ten years period. As for the US sanctions the decline was accounted for 13.4 per cent, based on a seven years period.

As sanctions were initially imposed on Myanmar to bring political and humanitarian change, rather than an economical change, a result is that limited studies have been studying the economic effects of sanctions. The existing research on the economic impact on Myanmar, due to sanctions, includes studies such as Portela (2014), Kubo (2014) and Lwin (2014).

Portela's (2014) paper based on four countries, examines whether the consequences of the EU sanctions corresponded to the expectations, what the impact of sanctions on the target leaderships and their countries was, and how sanctions reached the objectives. What makes this study depart from the paper written by Portela is that this paper is restricted to only Myanmar. This choice was made due to the aim of providing a more detailed and comprehensive picture of Myanmar that is missing in today's literature. Nevertheless, important findings can be obtained from Portela (2014). First of all, according to Portela (2014), the GSP suspension was not believed to have particularly disrupted the Burmese economy. However, it was one of the measures that penalised the population at large rather than its target. Secondly, her conclusion on why the sanctions failed to reach their objectives is because the sanctions never covered the energy extraction industry, Myanmar's key resource. Finally, she suggests that the combined effect of several sanctions inhibiting the private sector, coupled with low levels of aid, contracted the development of local industries while foreign operators remained. Portela argues that this is why Myanmar became more dependent on Chinese investments.

Moreover, to my best knowledge, there have only been two previous studies using a gravity model to examine the economic effects of sanctions imposed on Myanmar. It is the work of Kubo (2014) and Lwin (2009). Myanmar is not the main target country in Nu Nu

Lwin's paper, as the focus is on Cambodia, Laos and Myanmar (CLM) as a group, which is why it will not be discussed further in this paper.

Kubo (2014) uses a gravity model to analyse sanction's effects on Myanmar's non-resource exports. The conclusion is that the lifting of sanctions and the reinstatement of GSP are expected to enhance Myanmar's non-resource exports to the EU. The main difference between my study and the study of Kubo is that in addition to a gravity model, I am also doing a field study in order to capture effects that a gravity model cannot capture. As of the field study, my study will provide a more detailed analysis of individual sanctions imposed by the EU, instead of an overall analysis on all sanctions imposed on Myanmar. Kubo (2014) did also include the US sanctions that were levied on Myanmar. By mentioning this, I am aware of the fact that my paper will not be comprehensive in terms of providing results on how sanctions imposed by all senders have affected Myanmar, but that is not the aim of this paper. As there is already a lot of research on US sanctions in general², this paper is trying to narrow down the perspective to only examine the effects of the EU sanctions. Furthermore, the paper of Kubo primarily focuses on forecasting the non-resource export potential after lifting the sanctions, rather than analysing the effects of both imposing and lifting sanctions on Myanmar.

Building on the results from previous research, a few conclusions can be drawn. First of all, previous studies indicate that the EU sanctions levied on Myanmar failed its objective, as the sanctions did not have an impact on the military regime, but the population at large. Additionally, there is a variation of effects in different industries. Industries that, according to Portela (2014) were suppose to be targeted were never affected, and industries that were not supposed to be targeted were impacted. Due to the scarce information on the sanctions' impact on Myanmar, not many conclusions can be drawn from previous research. This study will try to fill this research gap.

3 Introducing sanctions

3.1 The policy of EU sanctions

Imposing sanctions is a fundamental EU foreign policy tool that is used to manage objectives in accordance with the principles of CFSP. The EU usually refers to sanctions as 'restrictive measures'. Officially the EU only uses 'sanctions' when the measures are in accordance with

² Such as Hufbauer et al. (1997 and Askari, Forrer, Teegen and Yang (2004).

the framework of CFSP. Other “negative conditionality measures”, such as reduction in aid or suspension of trade preferences, are not referred to as sanctions (Portela, 2014). However, this study will focus on the sanctions practise under the CFSP, as well as the negative conditionality measures. The negative conditionality measures are considered relevant as they, according to Portela (2014), correspond to the academic definition of sanctions and are regarded as sanctions by targeted parties. For this reason the negative conditionality measures will be considered in this paper as well.

The general intention of the EU’s restrictive measures is to bring about a change in policies or activities of the target country, government or individuals. The characteristics of sanctions are that they are preventive and non-punitive, which allows the EU to respond directly to political challenges and developments. The measures should, quoting the European Union External Action Service’s (EEAS) website about sanctions policy, “target the policies or actions that have prompted the EU’s decisions to impose sanctions and the means to conduct them, and those identified as responsible for these policies or actions”. The measures should then work to minimise consequences for those who are not responsible for such policies and actions, referring generally to local civilians and those carrying out legitimate activities. The sanctions must also respect human rights and be clearly defined in the legal acts. They should not work solely without being part of an integrated policy approach, involving political dialogue, complementary efforts and other necessary instruments (EEAS, 2016).

3.2 Targeted sanctions imposed on Myanmar

The sanctions against Myanmar are said to be ‘targeted’ which means that they are designed to only affect certain individuals, elites or economic sectors. More specifically, the target sanctions are suppose to put pressure on the leaders or elites, and their backers, who are responsible for certain behaviour, while sparing the population from harm (Portela, 2014).

As it can be summarised and quoted from the working paper *The EU’s use of ‘Targeted’ Sanctions - Evaluating effectiveness* (2014, p. 9), the package of targeted sanctions imposed by the EU involved the following measures on Myanmar³:

- An embargo on arms and military equipment;

³ For more detailed information, please see The Council Decision 2010/232/CFSP which can be found at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:116:0077:0097:EN:PDF>.

- Suspension of non-humanitarian aid (exceptions are permitted for projects in support of human rights, democracy, good governance, conflict prevention and building the capacity of civil society, health and education, poverty alleviation and environmental protection);
- A visa ban and a freezing of assets of members of the junta and high-ranking military officers, authorities in the tourism sector and family members;
- An investment and loan ban, including continuing participation in state-owned enterprises, and a ban on the creation of joint ventures;
- Suspension of high-level bilateral governmental visits;
- A ban on the attachment of military personnel to the diplomatic representations of Burma in EU member states, as well as on the attachment of military personnel to diplomatic representations of the member states in Burma;
- A ban on the export of equipment and technology and the provision of technical or financial assistance destined for enterprises engaged in logging and timber processing and the mining of metals, precious and semi-precious stones;
- A ban on the import of round logs, timber products, metals, precious and semi-precious stones.

EU sanctions were initially imposed on Myanmar in 1996 because of the violation of human rights and the absence of democracy. The sanctions mainly targeted the industries of logging and timber processing and mining of metals, precious and semi-precious stones. The EU first suspended its aid programme and imposed an arms embargo, a visa ban and a suspension of high-level visits. In 2000, the visa ban was extended, and a freezing of assets was further levied on certain blacklisted individuals. Further measures were imposed in 2003, particularly due to a house arrest of the leader of the the National League of Democracy (NLD), Aung San Suu Kyi, in order to force the authorities to release her and stop the harassment of the NLD. These measures were the expansion of the visa ban and freezing of assets to now also include further members of the military and associates of the military regime, a policy of votes against extending loans to Myanmar from international financial institutions and a prohibition on EU registered companies and organisations making financing such as loans available to state-owned enterprises. The prohibition implied that European companies could no longer invest in state-owned enterprises in Myanmar, but exempted existing investment, which could be extended.

The sanctions were further strengthened in 2006 as the investment ban was extended to include participation in state-owned enterprises. However, agreements made prior to October 2014 were free from this obligation (Portela, 2014).

The EU proposed new sanctions in a common position, in November 2007, due to the regime's violations of human rights and repression against peaceful protestors. These sanctions took effect when they were adopted in a Council Regulation in February 2008 (Council of the European Union, 2008). To quote Portela (2014, p. 10), these sanctions forbidden:

- The export of equipment and technology and the provision of technical or financial assistance *destined* for enterprises engaged in logging and timber processing and the mining of metals, precious and semi-precious stones;
- The import of round logs, timber products, metals, precious and semi-precious stones;
- The creation of joint ventures with blacklisted enterprises or their subsidiaries.

Within a few years, the sanctions were eased and phased out due to political and democratic progress. Aung San Suu Kyi was released from house arrest in 2010 and the nominally civilian, but still military-sponsored, government launched a series of reforms in 2011, including the release of several political prisoners and legislation of trade unions and political parties. Moreover, the NLD was allowed registration and won the by-elections of April 2012. In response to this progress, the EU eased the measures in 2010 and 2011 and suspended them in 2012, with the exception of the arms embargo. During this period, the bilateral dialogue between the EU and Myanmar was strengthened and the amount of development aid increased. All sanctions, except for the arms embargo, were finally lifted in 2013, and the GSP was reinstated the same year (Portela, 2014).

As can be observed in the figure below, the value of imports did not strictly decline until one year after the 2003 sanctions, and further after the 2006 sanctions. The value of imports slowly declined after 2008, to then stagnate until 2012, which may be a consequence of the sanctions imposed 2008. The imports finally increased in response to the sanctions being suspended in 2012 and lifted in 2013.

Figure 1 The value of the EU’s imports from Myanmar 1994-2014



Note: Data refers to EU12 for 1994, EU15 for 1995-2004, EU25 for 2005-2006, EU27 for 2007-2012 and EU28 for 2013-2014.

Source: European Commission (2016b)

3.3 The Generalised Scheme of Preferences (GSP)

The Generalised Scheme of Preferences benefit countries classified among the least developed countries. The preferences give a duty free and quota-free access to the European market, for all products except for arms and ammunition. One of the most favourable arrangements under the GSP, the ‘Everything But Arms’ (EBA), was reinstated in Myanmar in July 2013, after being withdrawn in 1997 due to violation of principles of the International Labour Organization (ILO) Convention on forced labour⁴. The trade preferences for Myanmar were later applied retroactively on 13 June 2012, when ILO acknowledged improved labour rights in the country. It was thus the ILO’s decision that allowed the EU to later reinstate the GSP in 2013 (European Commission, 2013)

⁴ ILO is an agency of the United Nations, which, among other tasks, sets labour standards and develops work-related policies in order to promote decent work for all individuals. For more information please go to the website: <http://www.ilo.org/global/about-the-ilo/lang--en/index.htm>.

4 How do sanctions affect trade?

While there is a wide range of definitions on sanctions, this chapter will only focus on targeted sanctions and the trade preferences, as they are considered more relevant for this study.

4.1 Targeted sanctions

As previous research suggest, the effects of targeted sanctions differ significantly between different impositions. Some targeted sanctions have no effect on trade, while others do. As of this, one can only discuss the expected effects of targeted sanctions. Before elaborating on how targeted sanctions affect trade, it is important to make a distinction between different types of targeted sanctions, as one cannot expect them all to have the same effects. Giumelli (2013) divides targeted sanctions into four categories. These are the following:

- *Arms embargo*: Denial of access to weapons and services that might be used for internal repression.
- *Travel bans*: Prohibition for member states to issue visas to certain individuals.
- *Economic measures*: Restriction of imports or exports of goods, services and technologies that might be used by the target group to accomplish a specific policy objective.
- *Financial measures*: Usually prohibition on financial transactions, export credits or investment. It can also refer to freezing of assets imposed on target individuals or groups.

When it comes to the arms embargo, one could only expect effects on trade if the product group of weapons and ammunition is a big trading group. Travel bans are most likely not significant to the value of trade, as they are not considered to significantly limit the access to trade.

The measures that may have the most impact on trade are the economic and financial measures, as they endeavour to limit the access to trade. If these measures were implemented successfully, one would expect them to change the relative prices, which could affect the consumption level negatively and result in a negative effect on trade⁵.

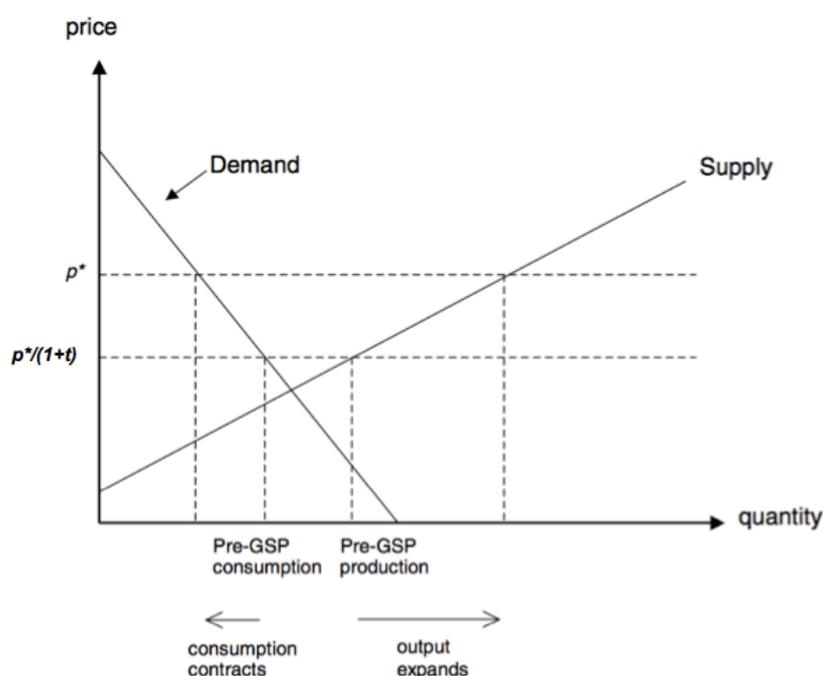
⁵ Note that this discussion is only grounded on the author's speculations, based on the description of the sanctions, and may therefore not be considered as reliable.

4.2 Trade preferences

The theoretical framework on how trade preferences affect trade is very established and therefore easy to illustrate. To understand the effects of the withdrawal of trade preferences, the subchapter will first describe the economic effects of *receiving* trade preferences and then describe the effects of *not receiving* them.

We assume that Myanmar is a ‘small country’. In trade theory, a small country cannot affect the world prices of the goods it trades, because the country’s imports and exports are insignificant relative to the size of world markets. This also implies that the country is a price taker.

Figure 2 Economic effects of receiving trade preferences



Source: Author’s version of Grossman & Sykes’ (2005, p. 58, Figure 1) illustration.

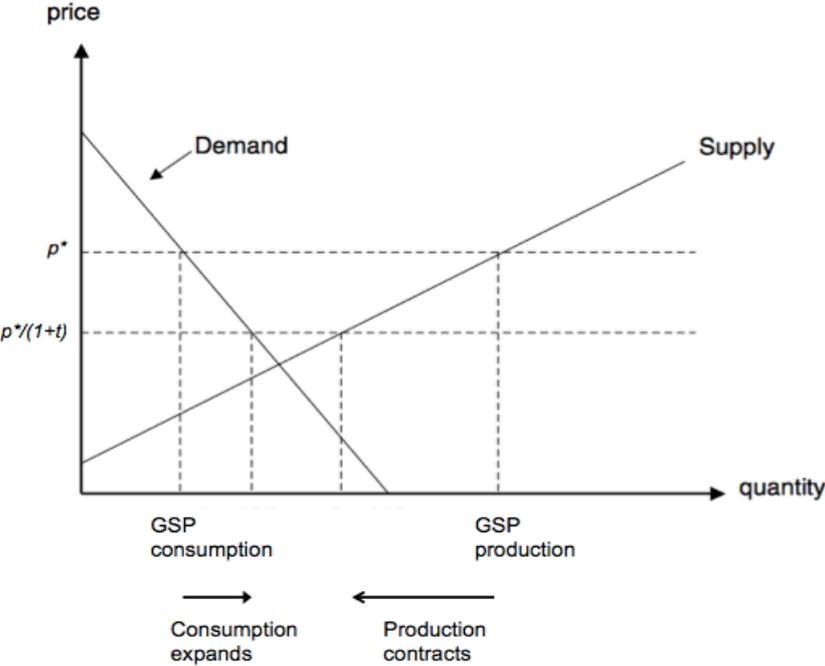
When exporters in a small country face a given world price of p^* and an ad valorem tariff rate of t as a preference-granting country, they must sell their output for $p^*/(1+t)$ to be competitive in the foreign market. This price will be the same in the home market of the country as producers will not sell for less than what they can earn on the world market, nor will the exporters be able to sell for more, given that they choose to export at that price in a competitive equilibrium.

The preferences excuse the exporters in the small exporting country from the generally applicable tariff. As the country is ‘small’, its exporters are too small to affect the internal price in the preference-granting country, which therefore remains at p^* . Due to this, the exporters can charge this higher price and remain competitive in the foreign market. As a result of the higher sales price, output expands as can be seen in Figure 2, and consumption in the small exporting country contracts. For these reasons, exports grow.

Moreover, the exporting country benefits from an improved ‘terms of trade’. Producers gain because their original sales attract a higher price and because their output expands to the point where marginal cost equals p^* . Some of the gain to producers comes at the expense of a loss of consumer surplus as domestic consumers face higher domestic prices due to the preferences. In summary, the country enjoys a net gain in welfare equal to the trapezium shaped area, between the supply and the demand curves and bounded by p^* and $p^*/(1+t)$ (Grossman and Sykes, 2005).

As Myanmar was no longer benefitting from the preferences after 1997, Myanmar’s exporters would have to sell their output for $p^*/(1+t)$ as a non preference-granting country, to stay competitive in the foreign market. Because of this, the output contracts and the consumption expands, as can be observed in Figure 3. Thus, Myanmar does no longer benefit from an improved ‘terms of trade’.

Figure 3 Economic effects of not receiving trade preferences



Source: Author’s version of Grossman & Sykes’ (2005, p. 58, Figure 1) illustration.

Due to the removal, producers will ‘lose’ because their products will be sold for a lower price at the same time as their output decreases. Domestic consumers will benefit from lower prices; hence there is a gain in consumer surplus. In total, the country faces a net loss in welfare due to the removal. Also note that Myanmar is immediately a relatively less attractive trading partner, as there are exporting countries that are still receiving the preferential treatment.

5 Empirical analysis

5.1 Empirical strategy

In order to answer the question of this thesis paper, the empirical strategy is divided into two parts. The first part examines the role of sanctions in a gravity model, and the second part examines the direct and indirect effects of imposing and lifting sanctions in field.

As the purpose of this paper is to examine the effects of sanctions, it is suitable to use the gravity model as it can measure trade effects. In order to examine the impact on Myanmar’s exports, we will first make a regression including Myanmar and the countries that were members of the EU in 1996, when the sanctions were imposed. This regression will cover the period of 1994 to 2000, as its aim is to catch the variation right before and after sanctions were first *imposed*. As we assume that it may take a few years before the sanctions will show an effect, 2000 was set as an ending point.

A regression will also be made for the period 2010 to 2014 with the intention of studying the effects when the sanctions were *lifted* in 2013.

This part of the study works as an introduction to the second part, which involves the field study, as it will explain:

- If the sanctions had significant effects on EU’s imports from Myanmar when the sanctions first were imposed and then lifted;
- And if so, if the effects differed much between the period of when they were introduced (measured in period 1994 to 2000) and the period of when the sanctions were lifted (measured in period 2010 to 2014).

5.2 Regression model

The traditional gravity model can be derived from a range of different trade theories, such as the theory of the Ricardian model, which says that trade patterns are determined by differences in technology across countries, the theory of the Heckscher-Ohlin model that relies on differences in factor endowments among countries being the explanation behind trade, and the theory of Krugman which relies on monopolistic competition to explain trade (United Nations, 2012a). The gravity model is therefore set to be a useful tool for understanding the determinants and patterns of trade, and for assessing the trade effects of trade policies and agreements. The main intuition is that the gravity model is a type of econometric model, which examines the trade effects of economic integration by conducting counterfactual regressions. In other words; by comparing how large trade flows would have been without integration, with the actual trade flows. Hence, the gravity model is believed to be best suited to answer the research question.

Newton's theory of gravity has been used frequently for analysis of bilateral trade. Tinbergen (1962) first applied the gravity model in 1962, using trade flows between country A and B as the dependent variable and setting Gross National Product (GNP) and geographic distance as explanatory variables. His finding was that the GNP variable had a positive effect on trade flow between two countries, while geographical distance had the opposite effect. So, countries with large economic size and less distance between them, tend to trade more with each other. Since 1962, several other economists, such as Anderson (1979), Bergstrand (1985) and Krugman and Obstfeld (2005), have presented formal application of the finding. The traditional gravity model, presented by Krugman, Obstfeld and Melitz (2012) is seen here:

$$(1) \quad T_{ij} = A \times Y_i \times \frac{Y_j}{D_{ij}}$$

where A is a constant term, T_{ij} is the total trade flow from origin country i to destination country j , Y_i and Y_j are the economic sizes of the two countries i and j (usually measured as GDP or GNP) and D_{ij} is the distance between country i and j .

An important contribution to the theoretical foundation of the gravity equation is the later work of Anderson and van Wincoop (2003), which points out the importance of relative trade cost. The authors mean that bilateral trade is not determined by absolute trade cost, but by relative trade cost. The tendency of country j to import from country i is determined by country j 's trade cost toward i , relative to its overall resistance to imports (weighted average trade costs) and to the average resistance facing exporters in country i . Because of this,

multilateral trade-resistance (MTR) should be taken into account as an appropriate average barrier between two countries. A great example to demonstrate this is found in United Nations' *A practical guide to trade policy analysis* (2012a). The guide is simply explaining that two countries that are surrounded by other large trading economies, such as Belgium and The Netherlands, bordered by France and Germany, will trade less with each other than if they were surrounded by oceans or deserts, such as Australia and New Zealand.

The formulas that will be used in this paper are the following:

$$(2) \quad \ln M_{ijt} = \beta_1 + \beta_2 \ln GDP_{it} + \beta_3 \ln GDP_{jt} + \beta_4 \ln Dist_{ij} + \beta_5 \ln Pop_{jt} + \beta_6 Sanctions_imposed_{ijt} + \varepsilon_{ijt}$$

$$(3) \quad \ln M_{ijt} = \beta_1 + \beta_2 \ln GDP_{it} + \beta_3 \ln GDP_{jt} + \beta_4 \ln Dist_{ij} + \beta_5 \ln Pop_{jt} + \beta_6 Sanctions_lifted_{ijt} + \varepsilon_{ijt}$$

where ε_{ijt} is the error term, M_{ijt} is imports to EU member j from exporting Myanmar i at time t . GDP_{it} is the value of Myanmar's GDP at time t and GDP_{jt} is the value of the EU member j 's GDP at time t . Pop_{jt} is the population size of the EU member j at time t .

Population and GDP are the main explanatory variables, as they determine the economic size of a country. The larger the economic size, the more it trades, so the economic size is supposed to have a positive effect on imports (Montanari, 2005). Myanmar's population is not taken into account here, as the population of Myanmar is believed to not have differed that much (compared to the EU's population in total) such as it would explain the variation in imports and therefore be significant. $Dist_{ij}$ is another important explanatory variable used in gravity models. It is the geographical distance in kilometres between EU member j and Myanmar, measured as the straight-line distance between the countries' capitals, as the capitals very often are the economic centres of the countries. Distance also accounts for transportation costs, which means that countries that are close to each other tend to trade more because the transportation costs are lower. Thus, distance is supposed to have a negative effect on imports.

Finally, the most important variables are the two dummy variables $sanctions_imposed_{ijt}$ and $sanctions_lifted_{ijt}$. Formula (2) is describing the period of 1994 to 2000, which will capture the effects of when the sanctions were imposed, while formula (3) is describing the period of 2010 to 2014, which will capture the effects of when the sanctions were lifted. In the first period, the dummy variable will take the value of one if the imposing EU country had sanctions imposed on Myanmar at the time, and the value of zero otherwise. As some countries joined the EU years after the sanctions were imposed, the dummy variable will take the value of zero for the years that these countries were not members of the EU, and take the value of one when they were members of the EU. For example, Croatia did not join

the EU until July 2013, and will therefore take the value of zero in the entire first period, as they were not affected by the policy introduced by the EU. A full list of when the countries joined the EU can be found in Appendix 2. In the second period, 2010 to 2014, the dummy variable will reflect the lifting of the sanction. As of this, the variable will take the value of one when the country had no sanction against Myanmar and zero for when the country had sanctions on Myanmar. As sanctions make it more difficult to trade, imposing sanctions should have a negative effect on imports, while lifting the sanctions should have a positive effect on imports.

In order to estimate the effects of imposing and lifting sanctions, the following formula can be used for calculating the percentage change in imports value (United Nations, 2012b)⁶:

$$(4) \quad (e^{\text{coefficient}} - 1) \times 100$$

Furthermore, the traditional gravity model relates the natural logarithm of the value of imports to the importing EU countries from Myanmar, to the log of their respective GDP, the distance between the importing EU countries and Myanmar, and the importing countries' population. This allows the estimated coefficients to be interpreted as elasticities. The regression applies the ordinary least squares (OLS) method.

5.3 Data

The structure of data is of panel data, as it observes multiple individuals over multiple time periods. Data on imports reported from the EU is extracted from Eurostat (European Commission, 2016b), where it is valued in euros and is assumed to be at current prices. While the paper is examining the economic effects on Myanmar's exports, import statistics reported by the EU countries have been used as the data quality is considered to be higher. Furthermore, constant prices are usually more preferable as they are adjusted for inflation, but this study will disregard this due to lack of data on imports at constant prices. GDP for the importing EU countries are collected from World Development Indicators (World Bank, 2016). As data for the exporting Myanmar was missing in this dataset, data for Myanmar's GDP was instead collected from the United Nations' (2015) Statistical Division (UNSTATS). Both these datasets contain values of GDP in US dollars, and at current prices to be consistent with the data on the EU's imports. In order to make a regression containing monetary values in the same currency, this data has been converted into euros by using historical annual

⁶ This calculation will be used when evaluating the estimation result in chapter 6.

exchange rates from fxtop (2016). Moreover, data for population has been extracted from World Development Indicators (World Bank, 2016). Finally, data on distance is taken from the website of Free Map Tools (2016). A summary of all data sources can be found in Appendix 2.

5.4 Estimation issues

5.4.1 Gauss-Markov assumptions

In order to estimate the gravity model used in this study, the software program Stata has been used. Before running any regressions, it is important to run a few tests first. The results from these tests can be found in Appendix 3. Running tests is a way of making sure that the estimator is unbiased, meaning that the estimator is, on average, equal to the true value β . The estimator is unbiased if the standard set of Gauss-Markov assumptions are fulfilled or adjusted for. Consistent with Verbeek (2014), these assumptions are:

1. The expected value of the error term is zero, meaning that the regression line should be correct on an average.
2. The explanatory variable and the error term are independent.
3. Zero correlation between the error terms, which excludes autocorrelation.
4. All error terms have the same variance, which means that there is homoskedasticity.

The first assumption is fulfilled if there is a constant in the regression, as it does not force the regression line to go through the origin and can therefore provide a better interpretation of the results (Brooks, 2009). Both regressions have a constant, thus the first assumption is fulfilled.

As for assumptions two and four a Breusch-Pagan/Cook-Weisberg test can be done. The test detects if heteroskedasticity is present in the data. If the null hypothesis is rejected, there is heteroskedasticity. Heteroskedasticity is a problem since it implies that the variance will always increase as long as the value of the explanatory variables increases (Verbeek, 2004).

Moreover, in order to test for zero correlation, as the third assumption indicates, a Wooldridge test can be done. It is testing the null hypothesis that there is no first-order autocorrelation. Autocorrelation is undesirable because it may cause underestimation of the standard errors (Verbeek, 2004).

When testing for heteroskedasticity and autocorrelation, both were detected in the first period, and heteroskedasticity was detected in the second period. To adjust for it, robust standard errors will be used.

5.4.2 Multilateral trade resistance (MTR)

As mentioned earlier in this paper, Anderson and van Wincoop (2003) pointed out the importance of relative trade cost by analysing the multilateral resistance, as in the barriers to trade that each country faces with all its trading partners, instead of just analysing the bilateral trade resistance, as in the barriers to trade between a pair of countries. as an appropriate average barrier, instead of just analysing the bilateral trade resistance. An easy way of controlling for MTR is to use country fixed effects for importers (Anderson and van Wincoop, 2004). Using fixed effects is appropriate when analysing the impact of variables that change over time, as fixed effects remove the effects of those, so called, time-invariant characteristics. Furthermore, using fixed effects is good for capturing unobservable country-specific factors as the fixed effects estimates are calculated from differences within each country across time (Klasen & Nowak-Lehmann, 2008).

5.4.3 Zero trade flows

Another estimation issue is how to address zero trade flows. Zero trade flows may be the result of rounding errors, missing observations that are incorrectly recorded as zeros or a country's decision not to export. The problem with zero trade flows arises from the fact that the traditional way of estimating a gravity model is to take logarithms and estimate its log-linear version. If there is zero trade in given years between the given countries, these will drop out of the estimation as the logarithm of zero is not defined. Using the Poisson Pseudo-Maximum-Likelihood (PPML) estimator can solve the issue of zero trade flows (United Nations, 2012a). However, there were only two observations containing zero trade flows in the model of this paper, thus OLS will be an okay estimation method to use.

5.4.4 Endogeneity

When estimating the impact of trade policies it is not unusual that a problem of endogeneity can occur. For example, countries tend to form trade agreements with partners who they already trade a lot with. If the model had a dummy variable for trade agreements, endogeneity

would imply correlation between the dummy variable and the error term. Endogeneity may also arise because of omitted variables bias. That is, trade agreements may be signed by countries that have other characteristics omitted in the regression, such as a peaceful relationship, that induce trade. According to United Nations (2012a), a way of overcoming the problem of endogeneity in a panel, due to the omitted variable bias, is by using country-pair fixed effects. While this study only has one exporter, importer fixed effects will be equivalent to country-pair fixed effects, thus importer fixed effects will still be used.

6 Estimation results

The estimation results of equation (2) and (3) are shown below in Table 1 and 2. The regressions are not adjusted for time effects, such as inflation, which may create bias results and make it more difficult to interpret the result correctly. When using fixed effects, the variable *Distance* becomes omitted, as there is no variance in this variable over time. The distance between Myanmar and each EU country is simply always the same.

Table 1 Period 1994-2000		Table 2 Period 2010-2014	
Dependent variable: ln(Imports)		Dependent variable: ln(Imports)	
Variables	FE	Variables	FE
ln(GDP_exporter)	1.613** [0.659]	ln(GDP_exporter)	0.370 [0.629]
ln(GDP_importer)	2.974** [1.170]	ln(GDP_importer)	0.670 [2.267]
ln(Distance)	-	ln(Distance)	-
ln(Poulation_importer)	1.649 [18.453]	ln(Poulation_importer)	-4.898 [0.351]
Sanctions_imposed	0.230 [0.208]	Sanctions_lifted	1.252*** [0.351]
R ²	0.731	R ²	0.423
Observations	118	Observations	126
Number of id	27	Number of id	28

Notes: *** p<0.01, ** p<0.05, * p<0.1. Result showing the coefficients of all variables. Robust standard errors in brackets. FE refers to importer fixed effects.

Focusing first on the period when sanctions were imposed, it is clear that the only variable that is significant and can be correctly interpreted is the GDP of the exporting Myanmar and the GDP of the importing EU countries. Thus, Table 1 suggests that a larger economic size

has a positive effect on imports and exports. Moreover, the EU countries' population is not significant and can therefore not explain the variance in imports.

Furthermore, as can be seen in Table 1, the action of imposing sanctions is not significant to the variation in imports. Hence, the gravity model suggests that the action of imposing sanctions on Myanmar did not have a significant impact on the EU's imports from Myanmar.

Looking at the results from Table 2, one can note that the results differ greatly from the results of Table 1. The first observation that can be made is that none of the explanatory variables are significant and can therefore not explain the variance in imports. Secondly, the variable that is significant is the dummy variable *sanctions_lifted*. While the other variables in Table 2 cannot be interpreted, the variable for lifting the sanctions can. With this said, by using equation (4) it is possible to calculate the percentage change in the imports value that is caused by lifting the sanctions. Equation (4) shows that, by lifting the sanctions, the imports value has increased by 249.73 per cent. The large increase when including fixed effects and not time effects may be a result of bias, which is why a conclusion drawn from these numbers should be taken with caution. It is however possible to acknowledge that the lifting of sanctions has a positive and significant impact on imports while imposing sanctions did not have a significant impact on imports.

7 Field study

7.1 Method

This part of the thesis paper will take a qualitative approach as it tries to seek a deeper understanding of how the sanctions may have had an effect on certain industries in Myanmar. An advantage of using a qualitative research strategy is that it is strategically conducted, but open for flexibility that makes it adjustable to changes in contexts and situations in which the research takes place. Furthermore, qualitative research aims to produce explanations or arguments for a certain intellectual puzzle, which in this case is built around the results of the regressions (Mason, 2002). Thus, the qualitative approach in this study aims to add an additional dimension to what can be analysed from the gravity model.

The main methodological strategy for answering this puzzle involves attempts to gain information on how the actions of imposing and lifting of sanctions have had an economic

effect on key industries in Myanmar. Thus, the research will take on a more descriptive approach that can later be validated.

A commonly used method in qualitative research is interviewing. This method is chosen as it can explain rather complex questions and provide an insight that may not be available elsewhere. Nevertheless, there are four aspects of interviewing that need to be addressed: reliability, validity, generalizability and ethical issues (Merriam, 2009). In qualitative research, reliability is linked with consistency (Leung, 2015).

Reliability can further be addressed by triangulation. Triangulation is a method used to check and establish reliability and validity in the study by using several data sources. By using several data sources one can check that the results on certain topics are consistent across several sources (Merriam, 2009).

Validity, which refers to how the information meets the reality, can be addressed by triangulation, but also participation control. Participation control refers to the action of giving the interviewee an opportunity to clarify, complement or develop the information (Merriam, 2009). To achieve validity and reliability in this study, through triangulation and participation control, several data sources study will be used and a copy of the transcribed interview will be sent to all interviewees.

Generalizability refers to the degree to which the results from a sample can be said to represent an entire population or, for example, an ethnic group. Generalizability can be addressed by the use of systematic sampling, constant comparison or triangulation (Leung, 2015).

Furthermore, the use of qualitative interviews as a method may raise a number of ethical issues, such as discussing topics that the interviewees may experience as distressing (Merriam, 2009). In order to conduct the qualitative interviews in an ethical way, extra consideration will be paid to what kind of questions will be asked and how they will be asked. Anonymity will also be provided as an option, and an informed consent form will be issued and discussed with the interviewees. Moreover, awareness of Burmese cultures, norms and how the participation may affect the interviewees will be addressed in the best way possible.

Before conducting interviews, a meeting with Johan Hallenborg, head of the Embassy of Sweden Section Office in Yangon, will be held. Mr. Hallenborg has been working in Yangon since 2014, and is therefore experienced in what is acceptable and familiar according to the culture and norms of Myanmar. During the meeting, questions on, for example, how to dress for an interview and how to greet someone will be discussed. A desirable outcome of

this meeting is to develop skills in how to conduct interviews in accordance to Burmese moral principles.

Qualitative interviewing, furthermore, refers to three forms of interviewing: structured, semi-structured and unstructured. Structured interviews are usually based on standardised close-ended questions that are kept the same for all interviews. This is an appropriate interview method if the researcher only needs specific information that does not entail elaborative answers (Gill et al., 2008). Unstructured interviews are useful if the researcher needs a greater understanding of the subject area or wants the interviewee to be more in control of where the interview is heading, which may work as a preliminary step towards using more structured interviews later on (Cohen & Crabtree, 2006). The interviews that will be conducted in Myanmar will be semi-structured as this allows access to people's knowledge, interpretation and experience that the research question is designed to explore. Furthermore, the semi-structured approach is more likely to generate a fairer and fuller representation of the interviewees' experiences as the interviewees are given more freedom in and control of the interview situation (Mason, 2002). In order to minimize bias the questions will mostly be open-ended and non-leading and, to some content, prepared in advance but allow for follow-up questions. Please see Appendix 4 for an example of a questionnaire that will be used.

Furthermore, Merriam (2009) suggests two selections of sampling methods: the non-probability sampling method and the probability sampling method. The distinction between these two is that the non-probability sampling method does not involve random selection and the probability sampling method does. Thus, with non-probability, the sample would represent the population, whereas the probability sampling cannot depend on this to be true. The non-probability sampling method is said to be more appropriate for qualitative research as the aim of that research is not to make a generalisation on the population (Merriam, 2009). This is also the approach of this paper. As the study is examining the effects of sanctions in Myanmar, the sampling will be selective, as focus is needed in a particular subject and location.

Moreover, two sampling strategies will be used. One, named by Goetz and LeCompte (1984), is the ideal-typical-bellwether-case sampling, as the researcher can develop an ideal profile for an individual that would be most suitable for an interview, and later search for a person who meets the profile. The other sampling strategy is to choose individuals that have been recommended by 'experienced experts', and are seen as ideal profiles with knowledge in the areas of exports, production, number of workers, trading partners and trading patterns.

These individuals will preferably work in the textile, fishery or agricultural industry, as these industries correspond to what the EU mainly imports from Myanmar, which can be seen in Table 3 below. Individuals from the timber industry are also of interest as this sector is mainly the one that the EU wanted to target with the sanctions (European Commission, 2016a). The industry of pearls and precious metals was originally also of interest as it is the third biggest import product group, but I was advised by the Delegation of German Industry and Commerce not to analyse this market, as there is nothing to find.

In order to not receive biased results, a selection of experts and ideal profiles with different perspectives and backgrounds has been chosen. For example, the sample group contains individuals from the timber industry and all industries that correspond to the EU’s top import product groups with the exception of pearls, precious metals and articles thereof. It also contains individuals both from the EU and from Myanmar, and individuals both from the government and from non-governmental organisations. Because of this, the results from the field study will reflect the perspective of those who were affected by the sanctions, those who were responsible for the sanctions, those who are natives, respective foreigners, and have a great insight in the topic, those who are engaged in the public sector and those who are engaged in non-governmental organisations (NGOs). This will create an unbiased result, as it is based on several sources and accounts for all parties’ experiences.

Table 3 Top trade products, imported to the EU from Myanmar in 2015

Product	Value Mio €	% Total
XI Textiles and textile articles	422	62.6
II Vegetable products	94	14.0
XIV Pearls, precious metals and articles thereof	46	6.9
I Live animals; animal products	32	4.8

Note: % total: share in total, total defined as all products.

Source: European Commission (2016a)

The interviews will be registered by using a recorder and by taking notes during the interviews. The advantages of using these techniques are that they allow the interviewer to be more present and focused on only writing down a few key words, while the whole interview can be transcribed afterwards. Disadvantages do exist, and these occur if there are technology problems or the interviewee does not want to be recorded (Merriam, 2009).

After transcribing the interviews, they will be coded as it helps to discover themes or patterns within the interviews but also in comparison to each other (Merriam, 2009). A copy of the transcribed version of the interview will then be offered to the interviewees so that they

can make adjustment. If there are any uncertainties or new questions have arisen, these will be brought up at the same time.

7.2 Results

After conducting interviews with people with different perspectives and standpoints it was quite clear that there were a few patterns and key words that all interviews had in common.

To start off with, there are four sectors in particular that were affected by the EU sanctions, according to the interviewees. These are the agricultural, fishery, timber and garment manufacturing industries. As sanctions were introduced in different stages and applied differently to different sectors, the impact on these sectors also differed (Interview with Dr Monika Staerk, 21 June, 2016). Because of this, this chapter will be divided into four parts; one subchapter with an overview of the effects, and three subchapters which will explain the effects in the different sectors more thoroughly. The fishery and agricultural sector will be combined in one subchapter, as the effects in these sectors are very alike. Additionally, trade statistics for the EU and Myanmar's top five export destinations will be provided. Myanmar's top trading partners can be found in Appendix 5.

7.2.1 Overview

Dr. Monika Staerk from the German Industry and Commerce in Myanmar has been involved with Myanmar for several years and is an expert in the field of sanctions. Her observation is that, until 2003, the people of Myanmar had seen very limited effects of the EU sanctions. Dr Staerk's explanation is that until 2013, foreign investors were still doing business in Myanmar, trading and supplying them with equipment.

In 2003, the EU imposed sanctions targeting mining, gems and timber as they were sectors where the EU thought the military and military linked companies had huge stakes. These sanctions prohibited EU countries to buy products from or to supply any kind of material to these sectors (Interview with Dr. Monika Staerk, 21 June, 2016). An indirect effect of the sanctions imposed on the mining industry, according to Dr. Monika Staerk, is that the industry is now lagging behind in terms of standards and efficiency, because the EU left them alone and instead left them in the arms of the Chinese. Furthermore, Dr. Staerk explains that the EU had collected a list of companies to which these bans on supply and imports referred to, which targeted companies in the timber industry as well, and made European companies

not want to get involved in this industry. As for other sectors, these sanctions did not have any effects. According to Dr. Staerk, the gems and pearl industry, for example, is a “muddy” industry with no transparency, and neither sales nor production are taking place according to Western standards. Moreover, as the Myanmar design does not match the Western expectations, it is not a relevant export sector for Europe (Interview with Dr. Monika Staerk, 21 June, 2016). This reason combined with the fact that it is a quite muddy industry, may be why the sanctions did not affect this sector.

According to Dr. Staerk, the military has also played a crucial role in this sector, as the military did not mind the EU sanctions since the export markets were in Asia. This theory is applied to the mining industry as well, for example on gas that is being exported to Thailand. Other sectors that have not been mentioned already in the paper were simply not particularly affected by the sanctions, as Myanmar was, and is still not, competitive in these sectors (Interview with Dr. Monika Staerk, 21 June, 2016).

Subsequently the effects became more severe in 2008 when the NLD leader Aung San was put to court and later sentenced to ongoing house arrest. As a response, the EU decided to tighten the sanctions to prohibit financial transactions to all the people on the sanction list (Interview with Dr. Monika Staerk, 21 June, 2016). The problem with these sanctions, quoting Dr. Staerk “is that the people involved, in Brussels but also national governments, did not have a full picture of the situation they created”. Her guess is that the people working on the Myanmar sanctions did not really know what they were doing, because the sanctions did not only prohibit financial transactions but also any assets which could serve as a replacement for financial transaction. Dr Staerk is mentioning a German supplier of consumer goods that could not place advertisement for their Myanmar products in their state-owned television any longer, because if you placed an advertisement you needed to make a payment. What people had in mind when they designed these clauses, according to Dr. Staerk, was to target gold, gems and real estate assets, but the general reading and implementation of the sanctions meant that all supply, including equipment, was forbidden. To quote Dr. Staerk: “as the sanction lists were so difficult to read and understand, from this moment on, the reputational risk factor grew enormously”. Dr. Staerk states that knowledgeable people based in Myanmar compared the list of blacklisted people and companies in the timber industry to a copy of the Yangon Yellow pages. Her theory behind this is that no one made the effort of reaching out to these companies, understanding their backgrounds, where they are sourcing their timber and if they are somehow related to the military. She says further: “you don’t want to take the risk of not listing a company which needs to be listed, so best thing is to take them all”. So even if

these sanctions were only supposed to affect listed entities, companies in other sectors were affected as well (Interview with Dr. Monika Staerk, 21 June, 2016).

Because of the difficulty of reading and understanding the blacklist, European countries, that were still allowed to source garments and transfer money to Myanmar, resigned (Interview with Dr. Monika Staerk, 21 June, 2016). Furthermore, it appears that individual EU countries enforced the sanctions differently. “Germany was probably the only country to really strictly enforce”, said Dr. Staerk. She further refers to a dialogue she had with a British expert, in 2008, in which the British expert acknowledged that they neither reduced nor avoided supplying to Myanmar, as the sanctions entailed. Another country, Switzerland, who normally implemented EU sanctions, translated the regulation so that the clauses were clarified to only prohibit transfer of any financial assets or assets that could stand for financial assets *like gold, gems and comparable*. By clarifying the clauses, it was, according to Dr. Staerk, “obvious that the Swiss sanctions did not affect any other supplier of equipment of raw material and so on”.

The fact that European countries adopted the sanctions differently may be a reason to why the exports to European countries did not decline as much as one may think it should, and a reason why there is no observable trend in the value of EU’s imports from Myanmar. An interviewee from the EU admits that the sanctions failed their objectives, and this is partly why they were lifted in 2013, as well as due to the improvements that had been made in the country. Nevertheless, after the lifting, the EU rapidly re-engaged in the country, opened up an EU-Delegation in Yangon and has provided major support to encourage reform efforts of the new government (Interview with an EU officer, 24 June, 2016).

The main conclusion from this chapter is that the sanctions with most impact on the imports were the ones imposed in 2003 and 2008. The sanctions imposed in 2008 were especially crucial as they affected entities that were not supposed to be targeted. Furthermore, the reason that we see no clear trend in the value of the EU’s imports from Myanmar is possibly because the sanctions were strengthened in different steps and because countries adopted the sanctions differently.

7.2.2 The timber industry

Dr. Sein Win, President at the Myanmar Forest Products Merchants Federation (MFPMF), the only commercial association for timber processing, is very familiar with how the EU sanctions affected the timber industry. According to Dr. Sein Win, the timber industry was

mostly harmed by the prohibition on financial transactions. Due to this ban, companies could not send anything to the EU. At the same time, neighbouring countries such as Korea, Malaysia and India, saw an opportunity to buy timber from Myanmar. Through these countries, Myanmar's timber was processed and then sold to the EU as if it was their timber (Interview with Dr. Sein Win, 27 June, 2016). He further summarizes it as: "what the EU really just did was to put sanctions on Myanmar's bank transactions, but not really affect the timber being exported and imported". Due to this, the sanctions failed their objective of targeting the timber industry and the effect was instead a change of trade pattern. Dr. Sein Win's theory is that this was not something that the EU was aware of at the time, because there were too many steps along the channels of distribution. But because of this, Myanmar's timber industry is today colonised by foreigners (Interview with Dr. Sein Win, 27 June, 2016). To quote Dr. Sein: "Government policy favoured the foreigner, but because of the EU sanctions it favoured them even more".

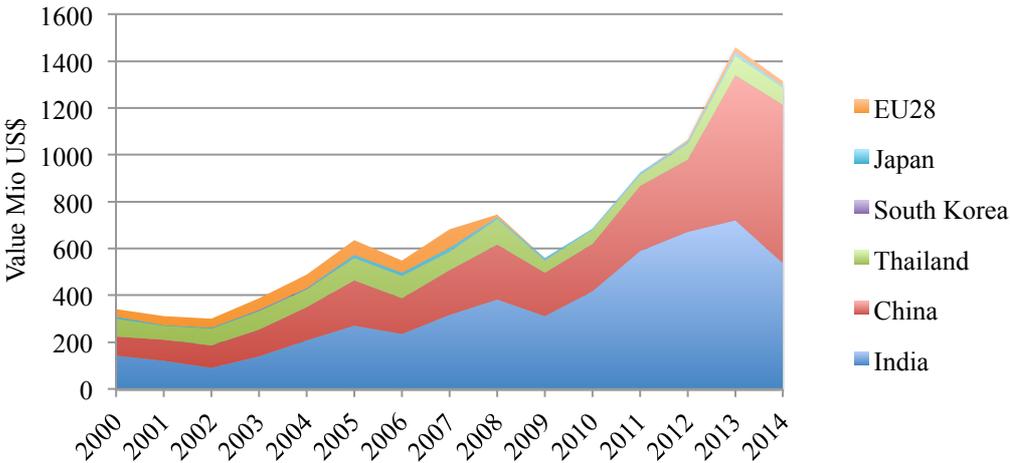
Another effect of the sanctions is that when the sanctions were lifted the market had changed and EU buyers did not fully trust the Myanmar companies anymore (Interview with Dr. Sein Win, 27 June, 2016). First of all, new standards and requirements, regarding environmental and social issues, were developed during the time the sanctions were levied. While a lot of other foreign companies were able to adapt to these new rules, the industry is now struggling to compete cost-wise, because it is lagging behind in production and technology (Interview with Dr. Monika Staerk, 21 June, 2016). Dr. Sein Win also expresses his frustration regarding the certificates that you need to issue in order to prove that you have met all the requirements. He says: "All our products can be sold all over the world, but the prices are not good and the EU as the end user does not trust us". Because of the difficulty in obtaining these certificates, the country is still relying heavily on outsourcing raw material to other markets that can sell their products. So, a lot of Myanmar timber is still sold in the European market, but they are channelled through other Asian countries (Interview with Dr. Sein Win, 27 June, 2016).

Dr. Sein Win further explains that there are current EU programs. They try to show how to make acceptable certificates, but he says that this process will take time as, for example, a lot of people from the EU do not understand the Myanmar system. While he means that their system are still rebuilding themselves, they would also like more exposure showing that they are doing the right thing. For example, they are trying to export furniture instead of raw material and they are trying to adapt to EU's values. Additionally, they are trying to achieve sustainable growth at the same time as production growth. There are a lot of

meetings being held with the EU, which he believes can build trust and a chance to sell furniture directly to the EU. At the same time there are a lot of foreign direct investments coming into the country, which he does not approve as they are out crowding the local businesses in Myanmar.

He believes that Myanmar’s market has potential to grow as it has excellent quality timber, but as can be seen in the figure below, the European market is still relatively small. Dr. Sein Win adds that there must be a split in the influence of power as the public sector today is much bigger than the private sector. Currently, there is transparency in the government, and as the president of the private sector Dr. Sein Win is able to use his influence at regular meetings with the government. So there is a lot of hope for the new government to change the business environment in Myanmar (Interview with Dr. Sein Win, 27 June, 2016).

Figure 4 Reported imports of timber products from Myanmar 2000-2014



Notes: Missing data for the period of 1994 to 2000. Data refers to SITC group 24 - Cork and wood.

Source: United Nations (2016)

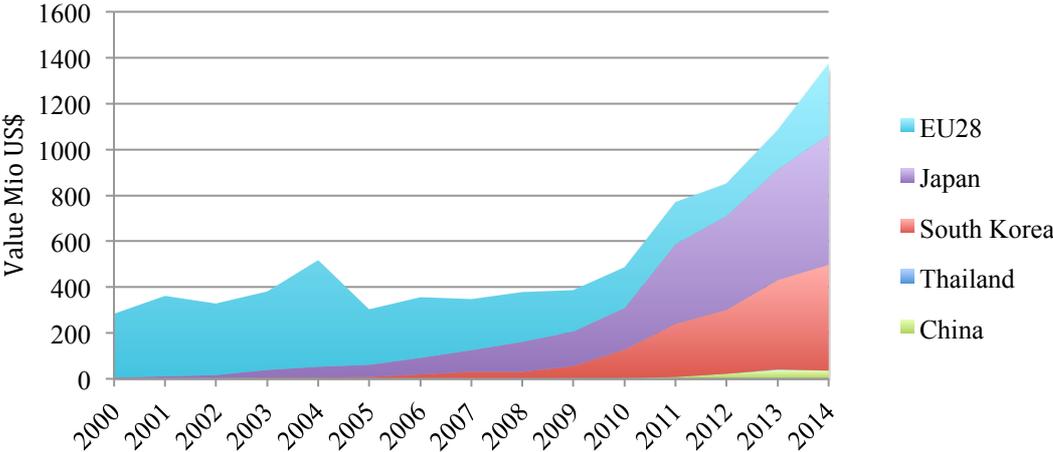
The conclusion on what has happened in the timber industry is that the sanctions first of all failed the objective of targeting the entities in the industry that were owned or controlled by the government, or those associated with the government. These entities simply exported raw material to other Asian countries instead. Secondly, the sanctions harmed the local businesses due to the limited access to European market during the time sanctions were imposed. An indirect effect of this is that the timber exporters were not able to adjust to the new requirements enforced on the market. To make the timber exports to the EU increase, the

Burmese exporters must comply with the requirements, build trust and empower the private sector.

7.2.3 The garment manufacturing industry

In the garment manufacturing industry there are three effects from sanctions; the first one is the decline in exports due to the GSP withdrawal in 1997, the second effect is the reputational risk of doing business with Myanmar as a Western company, and the last effect is an indirect effect from being cut off from the market; the struggle to compete with new compliances and standards once the sanctions were lifted. Nevertheless, the exports to European countries are rising and have been since the sanctions were lifted which can be observed in Figure 5, so there are companies trying to comply with these new standards.

Figure 5 Reported imports of garment manufacturing products from Myanmar 2000-2014



Notes: Missing data for India, and the period of 1994 to 2000. Data refers to SITC group 84 – clothing and accessories.

Source: United Nations (2016)

Daw Khine Khine Nwe, secretary general of the Myanmar Garment Manufacturing Association (MGMA), Myanmar’s largest business association for the garment sector, believes that the withdrawal of the GSP is the major reason to why Myanmar lost a lot of European buyers in that sector. As the EU withdrew the GSP, Myanmar did not get any trade privileges, which made the country less attractive, compared to countries that benefitted from GSP (Interview with Daw Khine Khine Nwe, 27 June, 2016). This could also be observed in Figure 3 (on page 16) that shows how a removal of trade preferences affects trade.

According to Khine Khine Nwe, the European market never disappeared as Myanmar was still allowed to export to Europe, but it became more difficult to compete. Khine Khine Nwe's theory is that, because of the GSP removal in Myanmar, European companies became interested in countries such as Bangladesh instead.

Moreover, the reputational risk did not become evident until 2008. Before 2008, European buyers could still place orders in Myanmar even if the GSP removal made the products relatively more expensive than earlier. In 2008, when new sanctions were implemented, sanctions did not forbid European buyers from purchasing in Myanmar, but the reputational risk had become too high which made European buyers change trade partner (Interview with Dr. Staerk, 26 June, 2016).

During the period of sanctions, Myanmar lost parts of the European market, and Asian competitors such as Bangladesh were catching up. At this time, social compliance and labour standards became more vital in Europe, which other countries could comply with step by step. But Myanmar who supplied to Japan, China and Korea, did not feel the need to adapt to these requirements. Once the sanctions were lifted the companies quickly started to realise that they were lacking social compliance, which discouraged a lot of the companies from competing in the European market, while others tried to make their factories compliant (Interview with Dr. Staerk, 26 June, 2016). A project that aims to help these factories to become more compliant is the EU-founded project SMART. According to the team leader of SMART, Jacob Clere, the European market is today the most exiting market available. Because of the GSP there is profit to be made and volume being demanded. He believes that there is some attraction to export to the European market, and that these Burmese companies can become competitive on the market if they invest money into improving the factories and their management.

Today Japan is still the biggest importer of garment manufacturing products. However, the EU's imports are growing rapidly, and within the two last years the EU has overtaken South Korea as the second largest importer. At the same time, Jacob Clere explains that the Chinese consumer market for garments is growing rapidly while their production costs are increasing which may have a negative effect on social standards and factories. Jacob Clere is worried about the foreign investors who are coming to Myanmar, he says:

What is happening right now, with the government policy on foreign investment and growth, it is impossible, just based on demographic and everything, that the industry won't be controlled by Chinese investments. It is unavoidable. We have on an

average, one Chinese garment factory opening up every single week in Myanmar. And on average, there is one other foreign factory opening once a month in Myanmar in addition to that. It is changing the shape of the industry very quickly, and these investments are not small. They are coming from the largest garment industry in the world with huge capital and huge expertise. You got this mid30s billionaire from Hong Kong setting up a factory. He has an extremely wealthy family and factories all over the world, even South America. For them Myanmar is an exiting diversification strategy and they set up a factory larger than any other factory in the country.

The quote reflects the effects of being more excluded from the European market, due to the sanctions. In order to not lose the local industry in Myanmar, Jacob Clere believes that the best strategy is to improve as quickly as they can and scale up as soon as they can. If foreign investors are crowding out the local industries, Jacob is afraid that the dialogue between the industry and the government will be lost. However, many local investors were, and some still are, positive toward foreign investments. He explains that some local investors have gotten into partnerships, while others have rented facilities or worked as subcontractors. So the resistance hasn't been as big as one might have expected (Interview with Jacob Clere, 27 June, 2016). This may be why we can see an increase in exports after the lifting, not only to the EU, but also to South Korea and Japan.

The main conclusion that can be drawn on the industry of garment manufacturing products is that the industry was mostly harmed by the GSP removal. The targeted sanctions did not seem to affect the industry as much, except from the reputational risk they implied. There is a decline in exports after 2003, which may be a result of the EU's requirements that were developed during the time sanctions were imposed on Myanmar. The requirements implicate a large indirect effect as they most likely have prevented the garment manufacturing industry from reaching its full potential after the sanctions were lifted.

7.2.4 The fishery and agricultural industry

Both the fishery and agricultural industry were impacted by the removal of the GSP. Due to the removal, Myanmar could not compete against countries such as China and Thailand, and therefore lost a share of the global market (Interview with Dr. Zaw Oo, 24 June, 2016). This was a direct effect of the sanctions, which also led to an indirect effect, similar to the one observed in the garment sector. After conducting an interview with Dr. Zaw Oo, former presidential economic advisor and currently the Executive Director of CESD, one can state

that a lot of companies are experiencing the same issues as the garment sector. Dr. Zaw Oo wants to highlight the issue with standards that were developed during the time sanctions were levied on Myanmar. These standards are, for example, food safety certificates that need to be approved by the EU. Because of the development of standards, Burmese export production of fish has not been emerging as fast as the countries that Myanmar was able to compete with 15 years ago (Interview with Dr. Zaw Oo, 24 June, 2016). Thus, the indirect effect of these sanctions is the development of standards that Burmese companies cannot comply well with, which makes them less competitive.

Regarding the GSP reinstatement Dr. Zaw Oo says that “having trade preferences is a necessary step, but it is not sufficient”. He further explains: “giving you GSP when you don’t have the institutions to back you up, you can’t really do anything. We will produce dirty vegetables and dirty fish and you [the European buyers] will not eat them”. Dr. Zaw Oo believes that it is not until the production is recognized with high standards, that the GSP will be beneficial.

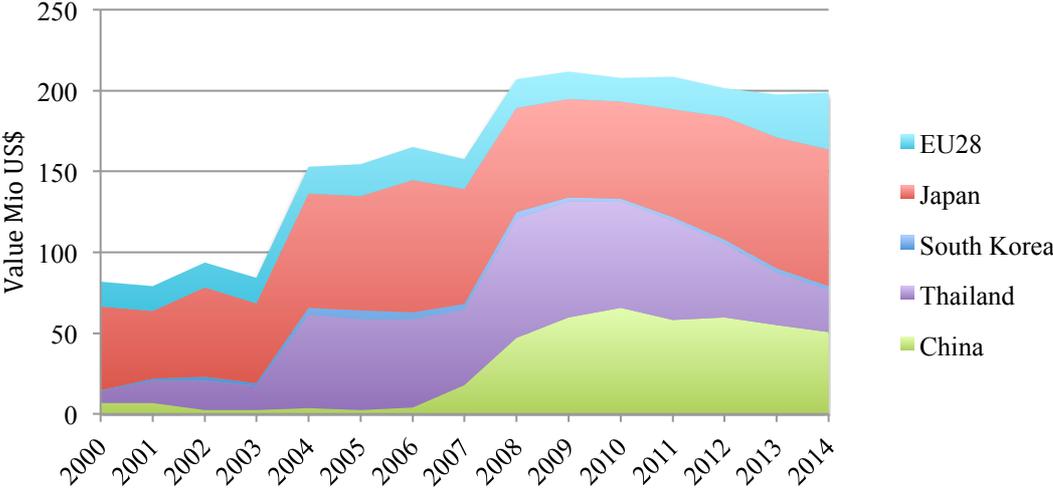
According to Tin Hla, coordinator for the Myanmar Fishery Products Processors and Exporters Association (MPEA), only 20 out of about 100 processing establishments have an EU approval number and can export to the European market. He further explains that it is very difficult to comply with the EU regulations, as many exporters cannot afford the testing charges from quality controls and such, which may be why the European market is still relatively small. But, according to Tin Hla, the European market is still attractive, due to the GSP, and he is hoping that the newly established cooperation with stakeholders such as the Centre for the Promotion of Imports from developing countries (CBI) and the International Trade Centre (ITC) will contribute to reaching the sector’s full potential. Mr. Hla further describes the importance of investments in technology and infrastructure, which he believes the collaborations can result in. Brussels has also shown an interest after the lifting, and is offering exhibitions for Myanmar’s fishery in 2017 (Interview with Tin Hla, 27 June, 2016). This could potentially make Myanmar more visible on the global market.

The EU is also founding a lot of projects in Myanmar, such as The Livelihoods and Food Security Trust Fond (LIFT). LIFT was established in 2009 with the objective of ensuring that the country’s rural economic transformation is inclusive. It is a multi-donor fund, founded by donors such as the European Union and Sweden (LIFT, 2016). This is one step closer to improving the capacity in the sector.

As can be observed in Figure 6, the export of fishery to the EU has slowly increased after 2012. However, many exporters still chose to export to other Asian countries after the lifting,

such as Japan or China, where there are fewer requirements (Interview with Dr. Zaw Oo, 24 June, 2016). In the agricultural sector, when looking at vegetables and fruits, the exports to the EU increased by more than 100 per cent in 2014 compared to the previous year when the sanctions were lifted. Albeit, the exports to neighbouring countries are much bigger than the one to the European market as can be viewed in Figure 7.

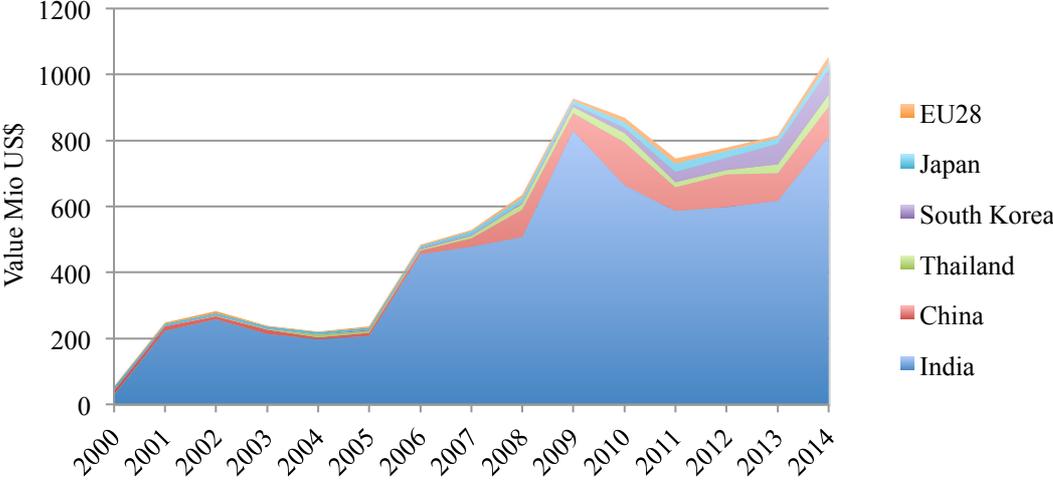
Figure 6 Reported imports of fishery products from Myanmar 2000-2014



Notes: Missing data for India, and the period of 1994 to 2000. Data refers to SITC group 03 - fish, crustaceans and mollusc.

Source: United Nations (2016)

Figure 7 Reported imports of agricultural products from Myanmar 2000-2014



Note: Missing data for the period of 1994 to 2000. Data refers to SITC group 05 - vegetables and fruit.

Source: United Nations (2016)

In the fishery and the agricultural sectors, one can conclude that the GSP withdrawal had a relatively large impact. Food products are known to be moderately sensitive to changes in price, which is why the effects from the GSP withdrawal may not have come as a surprise. One aspect of this is that European buyers changed their trade pattern and started importing from other countries, which compelled Burmese exporters to find other markets. The biggest implication from this is that Burmese exporters in these industries are now less competitive on the European market as they could not comply with the standards that were developed during the time sanctions were imposed and the country did not benefit from the trade preferences.

8 Summary and conclusion

The aim of this study was to examine the economic effects on Myanmar's exports due to the actions of imposing and lifting the EU sanctions and removing the GSP. The paper also tried to answer the question of if there was any observed variation in effects on various industries and if so: what were the effects and the underlying explanations for these.

In order to examine the economic effects of the targeted sanctions and the GSP removal, the paper took two method approaches. First, it employed a quantitative approach in the form of a gravity model. The gravity model was used to distinguish if the actions of imposing and lifting the sanctions on Myanmar had significant effects on the EU's imports from Myanmar. Secondly, a qualitative method was used in form of a field study where semi-structured interviews were conducted with people experienced in how the actions of imposing and lifting sanctions affected Myanmar's exports.

The estimation results from the gravity method suggested that the value of the EU's imports from Myanmar was affected positively and significantly by the action of lifting the sanctions. However, the action of imposing sanctions did not have a significant effect. The field study implied that the main industries that were impacted were the industries of garment manufacturing, fishery, agricultural and timber products. The biggest effect in all industries was that during the time targeted sanctions were imposed and the GSP was withdrawn, new requirements were developed which prevented the industries of reaching their full export potential after the lifting. This effect, along with the reputational risk and the sanctions prohibiting financial transactions and such, notably impacted Myanmar's exports to the EU.

The findings of this study may be of relevance if the EU decides to issue similar measures in the future as it can work as a guideline for what kind of consequences one needs to address and be aware of when imposing sanctions on a country like Myanmar.

The study is considered to have minimised the literature gap on how the EU sanctions affected Myanmar exports. However, the study could have provided a more comprehensive result if the gravity model had made a distinction between all types of sanctions that were imposed on Myanmar. Instead, the model in this paper did only take one dummy variable into consideration, which was the dummy variable, which in the first period distinguished if the EU countries had sanctions imposed on Myanmar, and in the second period distinguished if the EU countries had lifted the sanction. Because of this, the model did not capture the impact of every individual sanction. For future studies, it would be interesting to see if the result would differ if one created dummy variables for every particular sanction that was levied on Myanmar. This would be especially interesting to test, as the findings from the field study imply that it was not until the sanctions were strengthened in 2003 and further in 2008, that the sanctions drastically impacted Myanmar's exports. This could also be of importance when the EU is in the decision-making progress on imposing sanctions.

There is a discussion on if the sanctions fulfilled their objective or not. One aspect of it is that they failed the objective of targeting the military regime and the entities associated with the regime, and instead harmed the population at large, due to for example the design of the clauses of the Council documents. Another aspect is that Myanmar made a positive political transition, which was the intention of the sanctions. How much the EU sanctions played a role in this though is left to discuss as other factors, such as natural disasters or the US sanctions, may have impacted this process.

Regarding the EU's sanctioning policy, a few recommendations will be proposed. My first suggestion is that the EU should establish a thorough pre-assessment evaluation of how these sanctions are supposed to work in the certain country, what effects they are suppose to accomplish and what other effects they may create. I further believe that all countries can respond differently to sanctions, due to political, historical, geographical and economical factors. Because of this, the EU should make an analysis of different country-specific scenarios that may occur when imposing sanctions, in order to minimize or exclude negative effects before they actualise. I also believe that there needs to be an improvement in the monitoring once the sanctions are in place. For example, the Council could employ a group of experts that collect information on how the country performs and if the country attempts to evade the sanctions.

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Appendix 1

Table A1 Summary of previous research

Author	Country	Period	Method	Main result
Frankel	The US	1807-1809	Economic trade model	The embargo was defined as effective, but it failed through a lack of the political will to use it, which created a welfare lost in the US.
Irwin	The US	1807-1809	Economic trade model	The welfare cost in the US was estimated to be about 5 % in 1807 GNP.
O'Rourke	The US	1807-1814	Economic trade model	The welfare loss in the US was estimated to be 4-5 % per annum. The sender US was most harmed by the sanctions.
Hufbauer & Oegg	The US	1995-1999	Economic trade model (Gravity model)	Sanctions do not have a large impact economic impact.
Neuenkirch & Neumeier	67 countries	1976-2012	Economic trade model	The imposition of UN (US) sanctions lead to an aggregated decline in the target country's GDP per capita of 25.5 % (13.4%), based on a 10 (7) years period.
Portela	Myanmar	1996-2014	Quantitative method	The sanctions were unsuccessful, as they did not impact the military regime but the population at large.
Kubo	Myanmar	2004-2011	Economic trade model (Gravity model)	The lifting of sanctions and the reinstatement of GSP are expected to enhance Myanmar's non-resource exports to the EU

Appendix 2

Table A2.1 Members of the European Union and year of entry

1958-1994 (EU-12)	1995 (EU-15)	2004 (EU-25)	2007 (EU-27)	2013 (EU-28)
1. Belgium (1958)	13. Austria	16. Czech Republic	26. Romania	28. Croatia
2. Germany (1958)	14. Finland	17. Estonia	27. Bulgaria	
3. France (1958)	15. Sweden	18. Cyprus		
4. Italy (1958)		19. Latvia		
5. Luxembourg (1958)		20. Lithuania		
6. Netherlands (1958)		21. Hungary		
7. Denmark (1973)		22. Malta		
8. Ireland (1973)		23. Poland		
9. United kingdom (1973)		24. Slovakia		
10. Greece (1981)		25. Slovenia		
11. Spain (1986)				
12. Portugal (1986)				

Note: Croatia joined the European Union the 1st of July 2013, and will therefore not be affected by either the imposing or lifting of sanctions. Source: European Union (2016)

Table A2.2 Data sources

Variable	Data source	Notes
Imports (Asian countries)	United Nations (2016)	SITC rev. 3
Imports (EU countries)	European Commission (2016b)	EU trade since 1988 by SITC
GDP (EU countries)	World Development Indicators (World Bank, 2016)	
GDP (Myanmar)	United Nations (2015)	
Population (EU countries)	World Development Indicators (World Bank, 2016)	
Distance	Free Maps Tools (2016)	
Historical exchange rates	Fxtop (2016)	

Appendix 3

Table A3.1 Test for heteroskedasticity in period 1994 to 2000.

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of lnImports

$$\text{chi2}(1) = 4.56$$

$$\text{Prob} > \text{chi2} = 0.0328$$

Note: Null hypothesis is rejected at significance level 5%. Data is heteroskedastic.

Table A3.2 Test for heteroskedasticity in period 2010 to 2014.

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of lnImports

$$\text{chi2}(1) = 28.42$$

$$\text{Prob} > \text{chi2} = 0.0000$$

Note: Null hypothesis is rejected at all significance levels. Data is heteroskedastic.

Table A3.3 Test for autocorrelation in period 1994 to 2000.

Wooldridge test for autocorrelation in panel data

H0: no first-order autocorrelation

$$F(1, 13) = 8.399$$

$$\text{Prob} > F = 0.0125$$

Note: Null hypothesis is rejected at significance level 5%. Autocorrelation is detected.

Table A3.4 Test for autocorrelation in period 2010 to 2014.

Wooldridge test for autocorrelation in panel data

H0: no first-order autocorrelation

$$F(1, 24) = 0.753$$

$$\text{Prob} > F = 0.3940$$

Note: Null hypothesis is accepted at significance level 5%. No autocorrelation is detected.

Appendix 4

Questionnaire for interviews with associations and federations

- What is your role in the association?
- How long have you been involved in the association?
- How much do you know about the sanctions that were imposed by the EU?

Nothing at all Not much Familiar with it Know quite a bit Well familiar with it

- In general, how is the process when new restrictions and laws are enforced? How do you usually get informed in a company? Is it common to have anyone employed who is responsible for enforcement of new legislation?
- How did companies in the industry/industries respond to the policy?
- How did the companies react to the removal of the sanctions?
- How much valuable is the European market compare to other markets? How has the relationship with the EU evolved over time, compare to other markets?
- Were you more/less dependent on EU exports before the imposing of sanctions, compare to now?
- Who is your main importer? How has this evolved over time?
- Did you notice a change in the value/amount of inputs due to the sanctions? Was there a difference in the years of the restriction compared to the lifting in this area?
- Did you notice a change in the value/amount of outputs due to the sanctions? Was there a difference in the years of the restriction compared to the lifting in this area?

- How did the state play a role in the whole procedure from 1996 to 2013?
- Do you believe that the sanctions were imposed on equal basis for every firm?
- What were the general opinions about the sanctions and the expected effects?
- More foreign businesses are starting to establish in Myanmar now. Do you think the sanctions were part of their investment decision?
- Is there something we have not discussed that you would like to add?

Appendix 5

Table A5 Total goods: Myanmar's top trading partners 2014

Partner	Exports	
	Value Mio €	% World
World	16,932	100.0
1. China	10,66	63.0
2. Thailand	2,68	15.8
3. India	959	5.7
4. Japan	587	3.5
5. South Korea	397	2.3
6. EU 28	356	2.1
7. Malaysia	114	0.7
8. Singapore	109	0.6
9. Vietnam	92	0.5
10. Indonesia	84	0.5

Note: World trade: excluding intra-region trade. Top partners: excluding region member states. Data for 2015 has not yet been released. Source: European Commission (2016a)