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FINANCIAL CRISIS AND PROTECTIONISM IN NORWAY -A COUNTERCYCLICAL RELATIONSHIP?

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Reading an article in the Economist in 2012 drew my attention to the topic of financial crisis and protectionism. This article claimed that protectionism and support for nationalistic policies had increased in many European countries since the onset of the Great Recession. As I at the time had studied economics for three years, I had repeatedly learned how free trade is good and protectionism is bad, to put it to the extreme. This triggered my attention to learn more about a potential counter-cyclicality of protectionism. Does it always increase in the wake of a financial crisis? Realising that empirical proof is lacking for small open economies, I decided to research this relationship for my home country, Norway.

Working on this dissertation has taught me a lot. From the data collection, reading documents back the 19the century and collecting data year by year, to the empirical statistical research. The latter taught me a lot about adjusting time series statistics, knowledge I hope to take with me further.

In particular, I wish to express my deepest gratitude to my two supervisors; Ola H. Grytten (NHH) for helping me with the structure of the paper and coming with useful comments on how to improve my written work, and Sophie Béreau (LSM) for giving me valuable guidance on how to set up my regression model. Finally, I wish to thank Gabriela Stroea for proof reading my final work.

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Abstract

The present dissertation intends to explain the overall research question: "how and why does a financial crisis affect the average level of protectionism in Norway?" Ad valorem equivalent (AVE) tariffs in Norway are investigated between 1866 and 2012, covering six financial crisis.

Cycle values measured as deviations from (Hodrick and Prescott filtered) trend are used to discover and compare AVE in normal times versus AVE during financial crisis. The relationship between AVE and various macroeconomic variables from the theory of endogenous protection is inspected, with the OLS technique, to understand variation in the AVE rate over time.

Protectionism in Norway is found to often move countercyclically to financial crises. The AVE rate deviated negatively before and positively during and right after four of the financial crisis in Norway. However, a causal relationship is not confirmed in the OLS model.

These deviations from trend, as well as yearly percentage changes in the AVE rate, are largely a result of Norway following the great powers. The United States' AVE rate has the highest explanatory power and is the only significant variable that creates positive deviations from trend during a financial crisis. The unemployment rate also generates positive deviations from AVE-trend. As opposed to theoretical expectations, an increase in import penetration decreases the average AVE rate.

Evidence of a countercyclical relationship between a financial crisis and the AVE rate is, however, mainly a pre-General Agreement on Tariffs and Trade (GATT) phenomenon. The introduction of GATT sharply reduced the actual AVE rate in Norway. It also changed how AVE responded to the, above mentioned, macroeconomic variables. Of those, inflation is the only significant variable in the post-GATT scenario and was found to explain why the AVE rate deviated positively from trend during the Banking Crisis.

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List of abbreviations

AD: Anti-Dumping

AVE: Ad valorem Equivalents

EEA: European Economic Area

EFTA: European Free trade Association

GATT: General Agreement on Trade and Tariffs

GDP: Gross Domestic Product

GDPc: Gross Domestic Product per Capita

HP-filter: Hodrick-Prescott Filter

NTB: Non-tariff barriers

NTM: Non-tariff measures

OECD: Organization for Economic Co-Operation and Development

PSE: Producer Support Estimate

UNCTAD: United Nations Conference on Trade and Development

WTO: World Trade Organization

1. Introduction and purpose of the dissertation

In June 2012, the Economist (2012b) published an article with the title "protectionist alert: the world should heed warnings that barriers to trade are creeping up (The Economist, 2012b)." This, and similar headlines fronted several publications in the Economist and other journals.

With the onset of the Great Recession the fear spread of a new wave of protectionism with similar catastrophically results as during the Great Depression in the 1930s. The Great Depression saw a surge of tariffs, quotas and exchange controls used to protect the domestic market from foreign goods. World trade collapsed and remained low in the next decade despite the recovery of the worldwide economy (Eichengreen & Irwin, 2009).

As a resort to improve world trade, the period after the Second World War saw a surge in international trade and currency cooperation, with countries ratifying the General Agreement on Tariffs and Trade (GATT) and pegging their currencies to the dollar. As a result, the overall level of transparent measures of protectionism such as tariffs decreased dramatically.

Despite these increasing global trade connections, the Organisation for Economic Co-Operation and development's (OECD) Secretary-General Angel Gurría stressed that there will still be a strong temptation towards protectionism due to the undermining effect of the financial crisis (OECD Newsroom, 2012). Large international trade organisations such as the World Trade Organization (WTO) and the OECD have called for the G20 countries to resort from any trade disgracing actions. After all, the concept of globalization is not a new phenomenon. There was a time before the trade collapse when the global trade environment was open and more liberalized.

1.1. Research background and gap in knowledge

There has long been a consensus that protectionism tends to rise in recessions and fall in booms forming a countercyclical relationship between the average level of protectionism and recessions. Gallarotti (1985), Ray (1987), Grilli (1988), Bohara and Kaempfer (1991) and Bagwell and Staiger (2003) all found empirical evidence of a countercyclical relationship between protectionism and recessions.

The evidence of counter-cyclicality is mainly based upon data from large and powerful countries and regions such as the United States of America (USA) and the European Union (EU). It has been proposed that the effects of a financial crisis is not the same for small open economies as they do not have the power to influence the world price. Consequently, these

countries will not benefit from protectionism (Bagwell & Staiger, 2003). Bagwell and Staiger (2003) ask for more research on countries that fit into the category of small and open.

The present dissertation contributes to this request with an empirical and historical investigation on protectionism in the small open economy of Norway, investigating trade data back to 1866, covering six financial crisis.

1.2. Research Question and Objectives

Specifically, this study intends to examine the relationship between a financial crisis and the level of protectionism in Norway, answering the overall research question:

"*How and why* does a financial crisis affect the average level of protectionism in Norway?"

The average level of protectionism in Norway refers to annual, economy-wide, protection calculated as an average of all industry-specific protection rates. Further, this research question is split into two parts that will be answered in the present study: how and why.

1. How: is there evidence of a countercyclical relationship between the average level of protectionism in Norway and financial crisis?
2. Why: what determinants affect the average level of protectionism in Norway?
3. Has the answers to objective one and two changed over the years?

"How" is an effort to understand if Norwegian protectionism moves together with a financial crisis, and provides a partial answer to the request by Bagwell and Staiger (2003). It will contribute to understand if a counter-cyclical relationship in fact is a "big country phenomenon."

Cycle values measured as deviations from (Hodrick and Prescott filtered) trend will be used to discover and compare protectionism in normal times versus protectionism during financial crisis. Learning from the past can give important insights into how the Norwegian trade policy will respond to a crisis in the future.

Covering six financial crisis will allow for a comparison over the years, to see if a potential relationship is consistent or changing over time, or between financial crisis. In particular, it is of interest to see if the introduction of GATT has changed the way Norwegian protectionism responds to a financial crisis.

If a countercyclical relationship is found, why is that? If it is not, why? The why question takes insight from the endogenous protection theory. This theory uses macroeconomic variables to

explain the variance in protectionism. These variables are linked to the development of a financial crisis, and will serve as mediators between a financial crisis and the average level of protectionism in Norway.

Understanding reasons behind protectionism in a small open economy can help international trade organizations in their future task of creating global rules and regulations that better cover a heterogeneous group of member states. That is, a set of regulations that make sense both to small and large, developed and developing countries.

1.3. Limitations

The present study is limited to the Norwegian market, as an example of a small open economy. Furthermore, the analysis focuses upon the Norwegian economy as a whole rather than per industry.

Due to the nature of this longitudinal design the availability of data is limited. This study concentrates first of all on the average tariff rates in Norway from received import duties onto the Norwegian customs. This value is reported in official public reports from the Norwegian Statistical Bureau (SSB), and it is the only measure of protectionism available for such a long timeframe. These tariff rates are available for commodities and not for services.

Numerous theoretical themes have emerged during the years that intend to explain the determinants of protectionism. While the theories all have their value, this analysis concentrates on macroeconomic variables in the endogenous protection model as these topics lay closer to the national and international contagion of a financial crisis. This part of the analysis is also more applicable to the economy as a whole rather than depending on models that take a pure cross-industry point of view.

1.4. Approach

The following Chapter, 2, starts by developing some important concepts used in this dissertation. A theoretical explanation of the endogenous protection model, some critical points of view on this theory and a review of empirical findings concerning this topic follow this. Chapter 3 explains the methodology, starting with a brief explanation of the research design and an explanation of dependent and independent variables to be applied in the analysis. The definition and sources used for data collection is explained in Chapter 3.1., followed by a theoretical explanation of the HP-filter and of the OLS model used in this dissertation to detect causal relationships.

Chapter 4 presents the empirical results, with the HP-filtered tariff cycles in chapter 4.1., descriptive statistics to the OLS model in chapter 4.2 and the OLS models in chapter 4.3. Chapter 5 elaborates upon these findings and a conclusion is presented in chapter 6.

2. Review on determinants affecting protectionism

The theoretical review at hand begins by defining the working concepts of protectionism and financial crisis, followed by a description of the endogenous protection theory. This theory can help to understand how macroeconomic variables consistent with variables identified with financial crisis (cf. definition of a financial crisis) might influence the average level of protectionism in a country.

This theory also explains why small open economies make use of protectionism. While the theory of "economic efficiency" concludes that only large countries benefits from protectionism through improved terms of trade, political-economic models conclude that political gains can outweigh the economic "non-efficiency" costs. As such, protectionism can be perceived as beneficial also for small open economies (Bown, 2014). Since Norway is a small, open economy such a theory is well suited for the present study.

The endogenous protection theory will be evaluated and followed by a literature review of empirical findings. These sections will allow for a further understanding of the theory and possible development of the present paper's regression model.

2.1. Definition of concepts

Researchers tend to apply different definitions for the concepts of protectionism and financial crisis. It is therefore essential to establish which working definitions that will be applied in the present study.

2.1.1. Protectionism:

Abboushi (2010) defines protectionism as "the sum of government policies intended to assist domestic producers against foreign producers in a *particular* industry, by means of raising the price of foreign products, lowering cost for domestic producers, and limiting foreign producer's access to domestic market (Abboushi, 2010, p. 387)." This definition takes an industry point of view and assumes that some industries will receive more protection than others due to their nature.

The business dictionary defines protectionism as "governmental policy aimed at shielding a fragile economy, or a weak or critical sector, from cheaper or better imports (BusinessDictionary, 2014)." Evident from this definition is that protectionism can account for the economy as a whole and not only for specific sectors.

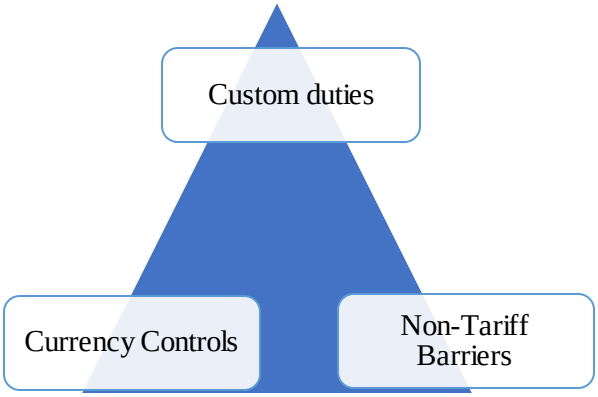
The present research intends to look at the overall level of protectionism in the Norwegian economy, and not per industry as a sector is assumed to be weak and critical independently of a financial crisis.

Important aspects to grasp from both definitions is that protectionism is a political measure and the level of protectionism will not move instantly with instability or stability in the market. Protectionism responds to weak and fragile situations and is intended to protect the domestic market, whether as a whole or for particular industries, against foreign producers.

Types of protectionism

The methods available to shield an economy are many and include duty rates (tariff barriers), non-tariff barriers and currency controls (Abboushi, 2010). Currency controls refer to the manipulation of exchange rates so that the price of the domestic goods are relatively cheaper than the imported goods (ibid). Non-tariff barriers are numerous and contain all methods which can increase price or otherwise limit a foreign producer's access to the market (UNCTAD, 2013). Figure 1 illustrates this relationships in a triangle.

Figure 1 Triangle of trade protectionism



Source: drawing based on definitions

2.1.2. Financial crisis:

Different definitions have been used to explain the concept of a financial crisis, and as of today there is no universal agreed upon definition. Classifications have been between pure currency crisis, capital account crisis and debt and banking crisis. Often such crisis overlap (Claessens & Kose, 2013). There have also been crisis that are purely financial without extensive effect on the real economy and vice versa (Grytten & Hunnes, 2010).

Professor Raymond Goldsmith (1982), a leading authority on this topic, defines a financial crisis as: "a sharp, brief, ultra-cyclical deterioration of almost all financial indicators, short term interest rates, assets (stock, real estate, land) prices, commercial insolvencies and failure of financial institutions."

Kindleberger's Crisis Theory

Another authority in this field Charles P. Kindleberger, connects a financial crisis to the real economy. He defines a financial crisis by looking at its development through several phases: manias, panics and eventually crisis, unless the development is halted before the economy reaches a crisis (Kindleberger & Aliber, 2011).

A financial crisis starts with manias which gather speed through an exogenous chock and the expansion of money and credit. This develops further through speculative manias when investors start acting irrationally and participates in excessive speculation in markets they know are overheated, resulting in euphoria, overtrading and excessive gearing. The mania phase will eventually stagnate when more sophisticated investors realize that their indebtedness is too large.

Financial distress follows when more investors rush to sell their stocks and assets and financial institutions stop supplying money and credit out of fear of further losses as prices continue to drop as demand decreases. Finally, a tragic meltdown in the real economy follows including slowdown in *GDP growth and increased unemployment*. Financial crisis can also spread between countries through monetary channels, trade channels, exchange rates, arbitrage (price) and pure psychology (Kindleberger, 1995b).

Deflationary pressure often spreads internationally through changes in currency values, deprecation when currencies are floating and devaluation when currencies are pegged. The price level also connects countries through arbitrage, a factor that changes prices in several international markets simultaneously ((Kindleberger & Aliber, 2011).

Trade in goods can also lead to international contagion through the foreign-trade multiplier, resulting in reduced purchase of imports for the crisis-country. In the nature of bilateral trade this means that the exports of this country's trading partner is reduced and thus also the national income of that country. This leads into a virtuous cycle as reduced national income of the second country will lead back to country one and to other trading partners (Kindleberger, 1995b).

From these definitions, a financial crisis refers to, in the present paper, a sharp and significant fall in financial indicators, which also leads to a recession deeper than the normal business cycles. Financial crisis can be purely national but also international spreading through several channels.

In accordance with this definition, table 1 presents an overview of financial crisis in Norway since 1875. The right side of this table includes the effects on the real economy during the respective financial crisis (Grytten & Hunnes, 2010, p. 8)

Table 1 Financial crisis in Norway since 1875

Time period	Financial crisis
1875-1888 (1893)*	The Long Depression
1899-1905	Christiania Crisis
1921-1928	Post-war crisis or pari-crisis
1930-1933	The Great Depression
1987-1993	The "Banking" Crisis
2007-	The Great Recession

**People disagree of the end of the Long Depression.*

Source: information attained from Grytten and Hunnes (2010, p.8)

2.2. Theoretical foundation of counter-cyclical protection

The principal focus of the theory of endogenous protection has been to establish determinants of trade policy and the resulting policy mix of protectionism and liberalism. Standard models of endogenous protection try to explain protectionism by combining the political environment with macroeconomic variables. Variables deducted from these models serve as indicators of both the demand of protectionism and of the likelihood of the government to supply protectionism (Sherman, 2002).

The present study concentrates on variables taken from the macroeconomic side of this theory and their influence on the demand and supply for protectionism. A macro-market view often intends to explain the business cycle hypothesis: "bad times favor protection" (Odell, 1990, p. 147) and is thus a direct link to the research question at hand. This approach was taken by, amongst others, Bohara and Kaempfer (1991) and Dollery and Whitten (1998). To gain a thorough understanding of how these macro-variables can affect protectionism it is however useful to start with an introduction to the political side of endogenous protection.

2.2.1. Political characteristics

Protectionism is assumed to be demanded by broad and specific interests and supplied by politicians. The theory denotes protectionism as endogenous because the level of average protectionist that is chosen is a result of the demand for protection and not controlled directly by the policy makers. Politicians "simply" grant policies and regulations which will maximize

their political support (Hansen, 1990). Protectionism is therefore controlled by other exogenous variables and is not exogenous in itself.

Demand and supply for protectionism

The evolution of early theories in this area have resulted in two main views on how the demand for protectionism is formed in an industry: from an interest group (or pressure group) point of view and from a median voter point of view (Gawande & Krishna, 2001).

From the interest group perspective, the level of protection is a result of political pressure from groups that lobby the government to adhere to their members' political interests (Gawande & Krishna, 2001). "Lobbying groups compete amongst themselves, all trying to influence the politicians the most to maximize their own wealth (Hansen, 1990)." Politicians will choose their policy mix in accordance with the strength of the pressure.

The median voter theory assumes that trade preferences are being voted upon. Due to this the politicians will chose such policies that will maximize the number of votes that they can receive. Thus, if the median voter in period t favours protectionism then politicians will choose a policy mix that does the same (Trefler, 1993).

Since this paper emphasises on the economic side of this theory it will not favour either approach. Both voters and lobby groups offer important insights. The demand for protection is therefore assumed to be created by both lobby groups and voters, as in the model of Magee et al. (1989). Voters have imperfect information and will be influenced by the ideas and political campaigns of the specific interest groups (lobbyists) (van den Berg, 1995).

Pro-protectionist versus anti-protectionist interests

Most models of endogenous protection make a simplification assuming that interest groups (and voters) belong to one of two main categories: those favouring protectionism and those opposing it. These two groups will work against each other trying to influence or pressure the politicians to adapt their point of view (Bohara & Kaempfer, 1991).

Including both lobby groups and voters, protection "is created between the narrow interests of protectionist and proexport groups, on the one hand, and the broad interests of voters (consumers) on the other hand (Magee and Young in Stern, 1987, p.6)."

Bohara and Kaempfer (1991) and Bagwell and Staiger (2003) theorize on the role of imports to an industry. Interest groups organized in import-competing industries are more likely to be in favour of import restrictions, as a measure to protect their own business. Interest groups

belonging to industries that depend on imports as intermediaries will prefer cheaper prices on imported goods and favour liberalism.

Looking at the economy as a whole, which is the task of this paper, an economy that largely depends on imports, would be less likely to have high levels of import protection, "regardless" of other variables. This issue will be further discovered in section 2.2.2.

Pressure from abroad

Van den Berg (1995) develops four scenarios on how demand for protectionism affects the policy mix. 1-3 is in accordance with the description of demand above and includes (1) maximizing votes (2) pressure form lobby groups (3) voters are influenced by political campaigns and are imperfectly informed. The forth scenario concerns foreign lobby groups.

These foreign lobby groups pressure their respective government to increase (decrease) the average level of protectionism in their country. If a country increases its tariff rate a partner countries will face a welfare loss as part of the cost of the tariff is borne by foreign exporters, who sell at a lower price. The gain of the tariff imposer is the equal to the loss of the exporter (Bagwell & Staiger, 2003)."

This loss can trigger a pressure for retaliation from lobby groups in other countries as a way to restore their own markets and offset the welfare loss (van den Berg, 1995).

2.2.2. Economic characteristics

The theory of endogenous protection assumes further that the ability of interest groups to pressure for protectionism depends on fluctuations in general economic conditions. This is one of the reasons why protectionism has tended to move in cycles (Sieg, 1997, p. 326).

When the productivity and wealth of economic activity falls lobbying will be considered as more important and the relative value of lobbying increases. "It is seen as less necessary (and more costly) to engage in lobbying when the economic conditions are creating favourable outcomes. Changes in the demand for protectionism is therefore expected with changing economic conditions (Sherman, 2002, p. 10)."

Magee et al.(1989) stress this relationship and its connection to the endogenous protection theory explaining variation in protectionism by : "those exogenous variables that drive the behavior of special interests and general interests who favor or oppose protection (Magee, et al., 1989, p. 183)".

There are no pre-determined set of macroeconomic variables which are applied to models of endogenous protection. In accordance with Sherman (2002), the five most commonly used variables are (1) unemployment, (2) GDP growth, (3) the trade balance, (4) inflation, and (5) exchange rates. These variables are used in, amongst others, Dollery and Whitten (1998), based upon the models of Magee et al. (1989) and Bohara and Kaempfer (1991).

Unemployment rate

It is generally assumed in the models of endogenous protection that high unemployment rates are positively related to a higher level of average protectionism.

With a high unemployment rate at home, lobby groups and voters will feel the pressure to lobby more intensively for the protection of the domestic jobs from international competition. Such a pressure is less intense in periods when the unemployment rate is low (Bohara & Kaempfer, 1991).

It is also easier for interest groups to gain public support for protectionism when the unemployment rate is high, playing on the image of "unfair competition stealing away domestic jobs (Bohara & Kaempfer, 1991, p. 958)."

GDP per capita growth

When growth in real GNP or GDP per capita is large, it is presumed that employment, exports and profits are increasing. When the economy as a whole is doing well it is assumed that voters and lobby groups feel less threatened by foreign competition and therefore they are more likely to favour a reduction in tariff levels (Dollery & Whitten, 1998).

More precisely, when the industrial sector is competitive there is less need for protection, thus predicting a negative coefficient in the regression model. When GDP (GNP) growth is slow, it assumes worse economic conditions, which will trigger a demand for protectionism. That is, decreasing competitiveness would increase the need for protection, (Blattman, et al., 2002).

Import penetration

The role of import values are especially important to the theory of endogenous protection. The most general opinion is that "higher levels of import penetration will lead to greater protectionism (Trefler, 1993, p. 139)." An empirical investigation should show a positive coefficient between import penetration as the determinant and protectionism as the dependent variable.

There is still the issue of competition between pro-protectionist and anti-protectionist lobby groups and voters as theorized by Bohara and Kaempfer (1991). Increased import penetration

might reduce the welfare of industries that compete with imports, while it might increase the welfare of industries that depend on imports for their production of goods (Gawande, et al., 2012).

However, due to the assumption on the relative cost of lobbying it is more expensive for pro-import groups to lobby for lower tariff rates when facing higher import penetration. The cost is relatively lower for import competing industries and therefore they will pressure harder for more protectionism (Sherman, 2002).

Inflation

In endogenous protection models by, amongst others, Magee et al. (1989) and Bohara and Kaempfer (1991) inflation is theorized to reduce the pressure for protectionism. Higher domestic inflation means higher prices at home. From a voter's perspective this might be perceived as a motivation for demanding cheaper imported goods. That is, as a way to lessen the inflationary pressure.

Bohara and Kaempfer (1991, p.953/954) include the possibility that inflation might increase the pressure for protection. That is, inflation will reduce competitiveness relatively to other countries which in turn will increase imports relatively to exports. This increase in import volumes can then trigger a pressure for more protection. Due to this, the pre-assumed coefficient can be both positive and negative.

Exchange rates

Real appreciation of currency reduces a country's relative competitiveness and makes imports relatively cheaper as compared to domestic substitutes. This can lead to increased protectionism pressure in order to improve or maintain domestic producer's competitiveness (Sherman, 2002).

That is often the case when the exchange rate is fixed as the country cannot take actions to depreciate its currency again. Fixed exchange rates can contribute to booms and busts as they affect the price levels and the balance of payment (Fingerand & Schuknecht, 1999, p. 20).

Partner country's protectionist level

In addition to these most commonly used variables the scenario of foreign lobbying was mentioned as a trigger for domestic lobbying. Blattman et al. (2002) theorize that countries will impose higher tariffs this year if they face higher tariffs from their main trading partners. A positive coefficient is expected (Blattman, et al., 2002).

Table 2 summaries these explanatory variables and their expected theoretical sign.

Table 2 Explanatory variables expected from the theory of endogenous protection, Chapter 2.2.2.

Expected Signs of the Explanatory Variables	
Variable	**Expected sign**
Real GDP per capita	Negative
Unemployment rate	Positive
Import penetration	Positive
Inflation rate	Positive or negative
Fixed exchange Rate	Positive
Appreciation of Currency	Positive
Partner country's protectionist level	Positive

Source: Adapted from Dollery and Whitten (1998, p.217). Exchange rate from Fingerand and Schuknecht (1999, p.20). Partner country's protectionism level from Blattman et al. (2002).

2.3. Evaluation of theory

The endogenous model of protectionism has been used by many to understand reasons behind protectionism. A critical investigation of this theory will help to understand challenges with the present study at hand and give guidance to how these challenges can be solved in the analysis.

Competition among lobby groups

The assumption that export industries (anti-protectionist interests) do not react to changes in the trade balance or other macro-economic variables due to relative lobby costs (cf. Chapter 2.2) might be misleading (e.g., Bagwell and Staiger, 2003, and Gawande et al., 2012).

Due to this, the coefficients assumed in table 2 might take a different direction. If anti-protectionist groups manage to lobby more efficiently than pro-protectionist groups, then macro-economic variables might not increase protectionism as one would have thought (Sherman, 2002). As such, a financial crisis is not assumed to increase protectionism to a great extent either.

It has been theorized more recently that, in countries where a vast majority of lobby groups depends largely on imports the average level of protectionism will be less likely respond positively to changing macro-economic variables (Gawande, et al., 2011).

Such situations can occur from vertical specialization when countries increasingly specialize in inputs, depending on international production sharing. It can also occur when countries specialize in different final products, leaving the production of many necessary products to other countries (ibid).

Might not give the full pictures standing alone

Odell (1990) claims that a macro-market view has helped to explain the phenomenon of protectionism well and has had better explanatory importance than many other used theories. However, "taken narrowly or alone this theory is inadequate (Odell, 1990, p. 148)."

While most theories focus on either one of these perspectives and contribute to a deep understanding on that topic, an integrated theoretical model including several factors would give a more holistic picture of protectionism. It would also help to better understand the causal effect of the macro-economic variables (ibid).

In particular, what is absent from the endogenous protection theories is the role of international institutions and multilateral trade negotiations, such as the GATT and the WTO. Their absence from the theory is noteworthy since their role has been to directly control and limit the use of protectionism between its contract parties. If a country is true to its obligations under the international trade negotiations, they are more likely to respond to the negotiated levels of protection and the tariff levels of their main negotiation partners.

The GATT and similar multilateral institutions have not eliminated or given less value to the explanation of pressure for protectionism. It has however given support and motivation for anti-protectionist groups to lobby against pro-protections lobby groups. A response in protectionism (or liberalism) to domestic political and economic variables are therefore assumed to be more limited in today's world than as assumed through the original endogenous tariff models (Sherman, 2002). See appendix 1 for an overview over relevant rules and regulations within these institutions

2.4. Research front on protectionism and business cycles

An extensive amount of empirical work have intended to investigate one or more of the theoretical explanatory variables in the partial endogenous protection model and the hypothesis of counter-cyclical protectionist levels. Empirical research seem to be split between findings before the 2000s and findings in regards to the Great Recession.

2.4.1. Business cycles and protectionism

It has been a general acknowledgement among most researchers that the average level of protectionism is pro-cyclical to recessions (e.g., McKeown, 1984, Gallarotti, 1985, Grilli, 1988, Feinberg, 1989, Bohara and Kaempfer, 1991). A more recent study from Bagwell and Staiger (2003) found that protectionism tended to move countercyclically to national business cycles.

Research on the current financial crisis are however contradicting, some studies show that "protectionism isn't countercyclical anymore" (Rosé, 2012)" or that that there has not been a surge in protectionism since the onset of the crisis (e.g. Gewande et al., 2011) while other studies find opposite results (e.g., Evenett et al., 2010).

2.4.2. Empirically testing the endogenous tariff model

Baldwin (1985) conducted early empirical research on the endogenous protection model. He tested the impact of import changes, unemployment and GDP on the organization of political pressure groups. From this, Baldwin found that a country's output and employment growth rates were negatively related to the level of protectionism. These findings cohere with the theoretical expectations of the partial endogenous protection model. The coefficient of import penetration was positive as expected from the theory.

In addition to these findings, Baldwin (1985) also concluded that the macro-economic variables included in his model had higher explanatory evidence than political variables. The latter were insignificant.

Another early research conducted by Olson (1983) found that changes in a country's income level and changes in the employment rate are the most likely variables to trigger a response from pressure groups. Magee and Young (1987) in Stern (1987) find that two third of the changes in US tariffs could be explained by their model.

Taking insights from the Magee et al. (1989) model, Bohara and Kaempfer (1991) find that (for the USA) changes in the unemployment rate and change in the inflation rate had the largest explanatory effect on changes in average tariff levels, fostering higher tariffs and lower tariffs respectively.

Trefler's (1993) empirical research found that changes in import penetration had high explanatory power. His research provides further evidence for the endogenous model as high unemployment rates also lead to more protection. Further, changes in import penetration rates were five times as important for explaining the dependent variable as concentration rate and number of firms in an industry, which are political variables.

Hoe and Chung (2008) applied the partial endogenous protection theory to the case of South Korea, another small economy, and found that import penetration had the most important impact on the level of protectionism confirming a positive coefficient. Change in import penetration however showed a negative coefficient.

Researching the significance of lobby groups for the final policy outcome, Gawande et al. (2012) confirm that lobby competition has a high explanatory significance of the U.S.'s variation in protectionism versus liberalism.

Import penetration and protectionism: a negative coefficient?

Bagwell and Staiger's (2003) findings partly agree with Trefler (1993) and the endogenous protection model in the sense that transitory increases in import penetration increased the level of protectionism.

An interesting result however is that they found a negative relationship between import penetration and protection when trade volume growths were positively correlated over time. In such a case, protectionism moves counter-cyclically to movements in import volumes, decreasing when the economy is in a boom phase with increasing imports and increasing when trade volumes decline. They concluded with this a connection between international business cycles and protectionism.

Gawande et al. (2011)'s empirical research confirms their theorem (c.f. Chapter 2.3.). They find that today's relatively low tariff levels could be explained by increased trade and dependency between countries. This supports the theory that countries that depend largely on imports resorts less to trade protectionism.

Fixed exchange rate and currency depreciation

A recent study by Bown and Crowley (2012) find like previous research that domestic unemployment rates increased the average level of protectionism, before 2008. They find further that the factors affecting protectionism changed after the onset of the Great Recession and that the exchange rate now explained the lack of change in tariffs and NTBs. That is, they found evidence of extensive depreciation of national currencies as a response to the recession, rather than increases in other import protection methods.

Keeping in mind that the triangle of protectionism also includes currency controls, as many countries including Norway used fixed rates before the 2000s it is logical that depreciation of national currency first saw a surge during the most current financial crisis.

Eichengreen and Irwin (2009) found similar results in their study on the Great Depression. They proved empirically that countries staying on the gold standard ended up protecting their economy with tariffs to a larger extent than countries that left the gold standard early. Countries that left the gold standard early such as the UK and Scandinavian countries were found to depreciate their exchange rate to adjust for their reduced competitiveness.

Retaliation

Blattman et al. (2002) found, as other studies on exogenous macroeconomic factors, that the growth of *GDP* per capita was one of the most important variables, which explained why some countries had higher levels of protectionism than others, in the 20th century.

However, when including retaliation as an explanatory variable Blattman et al. (2002) found that changes in trading partner's tariffs were by far most important variable that could explain the changes in a country's tariffs in the 20th century. That is, as compared to GDP per capita and other macroeconomic variables.

Interesting findings by Boffa and Olarrega (2012) contradict the past evidence of retaliation for the current Great Recession. They found no evidence of retaliation, instead it appeared that countries reduced their level of protectionism in response to an increase in a trading partner's level of protectionism.

Davis and Pecl (2012) find similar empirical results. During the last decade, countries were more likely to increase their level of protectionism when the recession was isolated and purely national than when the recession was more international in nature. These results from the 21th century are important contradictions to findings in the 20th century.

International institutions

Sherman (2002) conducted further research on the endogenous protection model since the 1950s and found that interest groups do not respond as assumed to the macroeconomic variables in the model. Instead, the average tariff level is adjusted in cooperation with the levels of their main negotiations partners, through the international processes and institutions such as the GATT.

Several recent studies, which have tried to understand why the current financial crisis has seen less of a surge in protectionism than expected, also find empirical evidence from international institutions such as GATT and the WTO. These institutions have been found to reduce today's level of protectionism and to reduce the potential of retaliation between countries (e.g., Bown, 2004, Gawande et al, 2011, Evenett et al., 2010).

Table 3 summaries this empirical literature review.

Table 3 Summary of empirical literature review

Authors	**Coverage**	**Measure**	**Research topic and results**	**Method**
Boffa and Olarreaga (2012)	November 2008-December 2010 Countries in database	Global trade Alert database (GTA)	Retaliation between trading partners. Found a negative relationship rather than proof or retaliation.	Logit model, regression

Bown and Crowley (2012)	1988Q1-2008:Q4 and 2008:Q4-2010:Q4 The USA and the EU	Temporary trade barriers, technical barriers to trade	Macroeconomic determinants of protectionism. Domestic and foreign unemployment and real appreciation in bilateral exchange rate most important before 2008. Little significance after 2008	Regression model
Davis and Pelc (2012)	1997-2009	Tariff rates and remedy investigations	Testing retaliation during a crisis. Countries impose less protectionism when the crisis is international than national	Logistic Regression model
Rose, Adrew K (2012)	30 years 60 countries	18 measures	Relationship between tariffs and NTBs and cyclical downturns. Protectionism found to be acyclical not countercyclical	Regression model
Gawande et al. (2011)	Pre and Post Great 2007	Most Favored Nations (MFN) tariffs and bilateral tariffs	Determinants of protectionism. Likelihood of increased protectionism today found to be low due to an increase in the importance of imports and international institutions.	Logistic Regression model
Eichengreen and Irwin (2009)	Early 1930s Countries in the gold block, sterling block and depreciation countries	Import Tariffs and import quotas	Comparing protectionism in different countries during the Great Depression. Countries staying on the gold standard found to be protecting the most	Empirical comparison of protectionism
Heo and Chung (2008)	Year 2000 South Korea	Annual average tariffs equivalents (AVE)	The endogenous tariff model in Korea. Import penetration has a positive (insignificant) coefficient. Changes in import penetration the opposite.	Regression analysis including 2SLS
Bagwell and Staiger (2003)	Two countries model	Unilateral tariffs	Counter cyclicality of tariffs and business cycles. Confirmed such a relationship through the trade balance.	Own designed model
Blattman et al. (2002)	1870-1938 35 countries, not Norway.	Natural log of own tariff	To understand which countries protected, and why. Changes in trading partners' tariffs was the most important determinant followed by GDPc	Regression analysis
Sherman, Richard (2002)	1953-1994 United States, Japan, and the EU	Tariffs	Testing the relationship between the endogenous protection theory and trade negotiations. The latter had a higher explanatory power.	Econometric, regression analysis
Dollery and Whitten (1998)	1903-1974 Australia	Average levels of tariffs	Endogenous protection model. Find the model to have high explanatory power in Australia	Vector Autoregressive model
Trefler (1993)	1993 United States	Several NTB in manufacturing	Testing the endogenous protection model. Find that import penetration has the highest explanatory power.	Regression analysis, also 2SLS
Bohara and Kaempfer (1991)	1870-1970 United States	Average tariff levels	Macroeconomic determinants behind protectionism.	Vector Autoregressive model
Magee and Young (1987)	1900-1984 The United States	Average tariff levels and AD statutes	Endogenous protection model. 2/3 of the changes in the average tariff could be explained by the model.	
Baldwin (1985)	Tokyo Round United States	Tariff data	Endogenous protection model. Found support for output and employment growth rates and import penetration rates	Regression models

3. Methodology:

This dissertation takes a deductive approach using determinants from an established theory to investigate the explanatory value of a financial crisis on the average level of protectionism in Norway. Data are collected from public Norwegian statistical sources and reach back to 1866.. These approaches are explained more in detail to lay the foundation for the research model and to argue for the validity and reliability of the data collection and methods.

3.1. Research design and determinants

The nature of this dissertation is to understand not only how, but why, a financial crisis affects Norwegian protectionism. Investigating these two questions, an exploratory-explanatory approach will be taken. Exploratory, the cycle values of protectionism in normal times versus during the pre-determined financial crisis will give an overview on how protectionism responds to a financial crisis without including the trend effect.

Since there are already established theories on determinants behind protectionism, this study takes a deductive approach drawing from the theory on endogenous protection. With this theory, a set of macroeconomic determinants has been established that will serve as independent variables in an explanatory research model, with the average level of protectionism as the dependent variable. The essence is to detect a causal relationship between the determinants and the dependent variable.

The macroeconomic determinants from the theory of endogenous protection are linked to the development of a financial crisis. That is, a financial crisis (often) reduces GDP, inflation and world trade, while it increases the unemployment rate. These macroeconomic variables will therefore serve as mediators between a financial crisis and the average level of protectionism.

3.1.1. Norway as a typical example of a small, open, economy

The analysis will be conducted on Norway as a (non-probability) typical case for a small open economy. Empirical research have been asked for small open economies and this dissertation is a partial response to that demand. Norway is chosen as an illustration and the results are not meant to be definitive. The focus is not on external validity but on understanding the situation in Norway. Still, as a small open economy the results of the analysis, compared to literature review conducted on large and powerful countries, might give some valuable predictions for how other small open economies respond to protectionism.

3.1.2. Time series regression through an archival research approach

Instead of restricting this research to the current financial crisis or any other financial crisis alone, a sample of tariff custom duties reaching back to 1866 will be used to create a

longitudinal research model tested with time series regression. This time span makes it possible to include empirical evidence from 5 international financial crisis and one purely national financial crisis: the Long Depression (1875-1888(93)), the Christiania crisis which had "only" a national reach (1899-1905), the pari-Crisis or after-war crisis (1921-1928), the Great Depression (1930-1933), the Banking Crisis (1987-1993) and the Great Recession (2007-).

Time-series analysis is useful as the theory of endogenous protection presumes that the strength and opinions of the different interest groups will vary over time and in accordance with changing economic conditions.

Due to the nature of longitudinal time series and the attempt to detect causal relationships, the data collection concentrates on secondary and quantitative data. To collect these data, this dissertation follows an archival research method, gathering data from official Norwegian registers, in particular from Central Bureau of Statistics of Norway (SSB) and the Norwegian Central bank. They report original collected raw data, which are collected in accordance with the public decided definitions.

3.1.3. Dependent variable

This research follows Roderíguez and Rodrik (2000) and Irwin (2010) and applies ad-valorem equivalents (AVE) as the best available method to measure trade restrictiveness on historical data. This method was chosen for Norway due to data availability from the mid-19th century until today. NTB's or calculations of efficient tariff rates are not available for a long time-period, most NTB's being documented only since the 1980s.

The variables needed to calculate AVE can be seen from equation 1 (NAPC-TPD, 2009)

(1) $$AVE = \frac{Custom\ Duties}{Imported\ Commodities'\ Values} * 100$$

3.1.4. Determinants

The determinants deducted from the endogenous protection theory serves as determinants in the present dissertation. To test the causality of a financial crisis, a dummy variable is added to the model indicating when there is a financial crisis. Understanding the importance of international institutions a dummy variable representing the introduction of GATT (=1) is also included. Table 4 summarises the independent variables used in this study and their expected sign (as from the original endogenous models). Additional variables will be added to the model to understand the validity of the variables in table 4.

Table 4 Determinants that will be used in the time series regression model

Dependent variable: AVE	
Determinants	**Expected sign**
Endogenous Protection Model	
Real GDP per capita	Negative
Unemployment rate	Positive
Import penetration	Positive
Inflation rate	Positive or negative
Fixed Exchange Rate (dummy)	Positive
Exchange rate (NOK/foreign)	Negative
Trading partner's level of protectionism	Positive
Control or Alternative Variables	
Membership in GATT (dummy)	Negative
Financial crisis (dummy)	Positive

Source: deducted from the theory of endogenous protection and empirical literature review (c.f. Chapter 2.2 - 2.4)

3.2. Data collection:

SSB as the official statistical bureau in Norway will be actively used in obtaining the time series for Norwegian trade data. SSB has collected data on various topics since the 19th century, including custom duties and import values (in kroner) needed to construct average AVEs. These data can be collected from SSB's "Statistical Yearbook of Norway." These data are reported in the table "Imports and Exports" or "Aperçu général de l'Importation et de l'Exportation" depending on secondary language used in the report. The table number depends on the report at hand.

These books have been digitalized by SSB and are available for download SSB.no (2014). This study collects data from *1866 until 2013* going through all the individual yearbooks, transferring the raw data into an excel file. Avoiding typing in the wrong numbers from the PDF-files to the excel file, this process has to be done thorough and carefully and validated repeatedly.

SSB receives data from the national Customs Authorities that follows the recommendations from the United Nations Statistical commission for collection of data. Post 1958 import data includes all goods imported into the country for direct use, as well as goods stored in credit warehouses and goods from transit warehouses, that is, custom cleared goods (SSB, 1978).

Between 1939 and 1958, a system of special trade as compared to general trade was used for collecting trade data. The difference has to do with which data passes the bonded warehouses, special trade referring to goods only for consumption. In accordance with SSB, the effect of

this change is insignificant and should not affect the comparison of figures over time (SSB, 1978, p. 255).

The classification of commodity groups have also changed over the years, changing with international classifications such as the Standard International Trade Classifications (SITC) introduced in 1953. This thesis concentrates on the average AVE rate and is not concerned with different commodity groups.

The Norwegian Central Bank is the other main source for data collection. The project "Historical Monetary Statistics of Norway" has worked on gathering data for historical Norwegian GDP, inflation, exchange rates, monetary volumes and more.

The definition of unemployment has varied during the time span. Mitchell (2003) has collected unemployment ratios for various countries including Norway reaching back to 1904. In his time series, two different definitions are used- The first one from 1904-1971 includes unemployment among trade unionists and the other from 1971 includes a full coverage or registered unemployed and unregistered discovered through a survey. The definition used was adjusted in accordance to data availability, and is assumed to be the best possible available coverage.

Table 5 gives an overview over definitions used in this study and their respective source where the same data can be found.

Table 5 Definitions, information and sources used to collect data for dependent and independent variables and control variables used in this study

Variable	**Definition, information and sources**
Ad-valorem equivalent (AVE)	DEFINITION: Custom revenues divided by value of total imports, at current prices. SOURCES: SSB statistical yearbook from 1880 to 2013 for both custom revenues and import values in NOK. Tables: "Net Expenditure and Tax Revenue of the Central Government" and "Imports and Exports" respectively Pdf-files can be downloaded from (SSB.no, 2014)
Producer Support Estimate (PSE)	DEFINITION PSE: "the annual monetary value of gross transfers from consumers and taxpayers to agricultural producers, measured at the farm-gate level, arising from policy measures that support agriculture, regardless of their nature, objectives or impacts on farm production or income (OECD, 2009, p. 19)" SOURCE: OECD.Stat (2013). PSE Database for Norway
Real GDP per capita	DEFINITION: Gross domestic product for Norway, by expenditure in fixed prices (2005-NOK) SOURCE:

	Grytten, O.H (2004)
Unemployment rate	DEFINITION: *1904-1971*: Trade unionist unemployed *1972-2009:* Total unemployment coverage from sample survey (labour force survey) and registered unemployment figures. Persons aged 16 to 74 years pre-2006 and 15-74 from 2006 All figures are average of monthly observations *2009-2012:* Annual total unemployment rate, OECD Annual Projections SOURCES: 1904-1972: Mitchell, B.R (2003) 2009-2012: OECD.Stat (2014)
(Real) Import penetration	DEFINITION: Ratio between the value of imports (IM) as a percentage of total domestic demand. Total domestic demand is calculated as GDP-exports + imports (OECD.Stat, 2005). GDP, Imports and Exports are values in 2005-Norwegian Kroners SOURCES: GDP, Import and Export: Grytten O.H (2004b)
Inflation	DEFINITION: Consumer Price Index (CPI) for Norway, annual figures, from 1516 (1998=100) SOURCE: Grytten, O.H (2004a). "Figures from 1960 correspond to Statistics Norway's data for the consumer price index (Grytten, 2004a)"
Partner's tariff (USA)	DEFINITION: Ratio of Collected Custom Duties to the Value of U.S. Imports for Consumption. Customs on all imports. SOURCE: U. S. Department of Commerce (2011)
Financial Crisis Dummy	DEFINITION: = 1 if there is a financial crisis, 0 otherwise SOURCE: Grytten, O.H and Hunnes, A. (2010)
Exchange Rate Dummy	DEFINITION: = 1 if there is a fixed rate, 0 otherwise Norway's exchange rate was mostly fixed until 2001 SOURCE: Eitrheim (2012) from the Norwegian Central Bank. Lecture at the Norwegian School of Economics.
Membership in institution	DEFINITION: =1 if Norway is a member of GATT, 0 otherwise Norway ratified the GATT agreement on the 10th of July 1948- SOURCE: WTO (2013)

3.3. Data analysis:

The how question will be solved by investigating filtered values of Norwegian AVE rates between 1866 and 2012. The why question will be solved with time series regression models.

3.3.1. How does a financial crisis affect the level of protectionism in Norway?

As a first step, the measures of protectionism will be investigated applying the Hodrick-Prescott filter (HP-filter). This technique will allow us to, roughly, visualize whether there is a simultaneity of occurrence of a financial crisis and peaks or downturns in the HP filtered series of protectionism.

A HP-filter makes time series stationary and separates the observed protectionism time series into a trend component, t_t, and a cyclical component, ct, as can be seen in equation (2)

(2) $$y_t = t_c + c_t$$

The cyclical component can be seen as a measure of the business cycle. To separate the business cycle effect from the observed values, the trend component can be deducted from the observed values using the log formula in equation (3):

(3) $$c_t = \log y_t - log t_t$$

Visible in a graph, the trend will be stationary and the cyclical component will fluctuate around the trend value making visible when there were or if there were large deviations from trend. To make the trend stationary, the HP filter smoothens the trend component using a chosen smoothing parameter, λ. Equation (4) shows this:

(4) $$min \sum_{t=1}^{m} c_t^2 + \lambda \sum_{t=2}^{m-1}((t_{t+1} - t_t) - (t_t - t_{t-1}))^2$$

In equation (4) m is the sample size. The smoothing parameter decides how smooth the trend will be made and thus how clear the cycle effect fluctuating around the trend will be. A larger λ makes the trend smoother. The standard λ-value for annual data is 100 (e.g., Backus & Kehoe, 1992, Grytten and Hunnes, 2010). Others suggest using the λ-value of 400 (e.g., Cooley & Ohanian, 1991, & Correia et al, 1992).

One problem often associated with the HP-filter is the end-point errors where the trend and cycle effect disappears at the end of the time series. A way to solve this problem is by increasing the smoothing variable. Grytten and Hunnes (2010) use a λ-value of 2.500 on Norwegian GDP-values to make the trend smother and the cycles clearer. The present study will use the larger λ-values when an end-point problem is evident in the protectionist time series.

The how question will in addition to empirical cycle values include some qualitative elaboration upon the causes of the particular financial crisis. This will help to gain a deeper understanding of the topic and to elaborate upon the empirical findings.

3.3.2. Why? A model of average protectionism in Norway

Multilateral regression analysis with the ordinary least squares method (OLS) is used to estimate the determinants described in table 4.

Adjusting the time series data

A problem with fitting economic time series with the OLS method is that the original unadjusted data often are far from stationary. The data often also has to be adjusted to fit the OSL requirements of normal distribution. Applying the HP-filtered values in the OLS model is a way of solving this stationary problem. In that model, change in deviations from trend are used as the determinants and as the dependent variable.

Time series can also be made stationary by first differencing the data as it calculates the relative changes rather than absolute changes in the data. Taking the natural logarithm (log) of the data is often used in time series to normalize the data. The first difference of logharitmic data represents a percentage change. This adjustment was taken by Dollary and Whitten (1998) on all the data for Australia and in Bohara and Kaempfer (1991).

In this dissertation, residual plots will be analysed to find the right mix of logarithmic and differenced values to fit a good OLS model. Knowing that protectionism is a political variable it might not respond immediately to changes in macroeconomic variables. The determinants will therefore be tested for an appropriate lag structure.

An OLS model is only good if all the determinants are exogenous. If the Norwegian AVE rate also affects the assumed independent variables the coefficients in the model might be biased. Following Bohara and Kaempfer (1991), table 6 shows hypothesis to test the effect of AVE on the determinants. The hypothesis will be tested by granger causality estimated by OLS.

Table 6 Testing the effect of AVE_{t-1} on determinants in the regression model

H1:	Norwegian AVE rates do not cause changes in the level of real GDP per capita
H2	Norwegian AVE rates do not cause changes in the level of unemployment
H3:	Norwegian AVE rates do not cause changes in the level of import penetration
H4:	Norwegian AVE rates do not cause changes in the CPI level
H5:	Norwegian AVE rates do not cause changes in the U.S. AVE rates

Adapted from Bohara and Kaempfer (1991, p.956)

OSL Models

Model (i) serves as the initial model measuring the relationship between the chosen determinants and the average level of protectionism:

(i) $$y_t = \alpha + \beta' x_t + \delta_1 1\{FC\} + \delta_2 1\{EXC\} + \varepsilon_t$$

where $\beta' x_t$ is a function that sums up all the determinants, x_t, from table x with their regression coefficient, β. $\delta_1 1\{FC\}$ represents a dummy variable with the coefficient δ_1 for the presence or not of a financial crisis and $\delta_2 1\{EXC\}$ is a dummy variable with the coefficient to account for the currency imperium in Norway:

$$\delta_1 1\{FC\} = \begin{cases} 1\ if\ there\ is\ a\ financial\ crisis \\ 0\ otherwise \end{cases}$$

$$\delta_2 1\{EXC\} = \begin{cases} 1\ if\ the\ exchange\ rate\ is\ fixed \\ 0\ otherwise \end{cases}$$

Although the chosen macroeconomic variables are assumed to increase during a financial crisis (c.f. definition of a financial crisis), changes in these variables can occur independently of a financial crisis. To investigate if the determinants are significant when there is a financial crisis, each determinant will be multiplied by the financial crisis dummy. The variable $\delta_1' * 1\{FC\}x_t$ in model (ii) shows that each determinant, x_t, will be multiplied by 1(FC) revealing the coefficient δ.

(ii) $$y_t = \alpha + \beta' x_t + \delta' * 1\{FC\}x_t + \varepsilon_t$$

As such, it is possible to see how the determinants affect the average level of protectionism when in fact there was a financial crisis in Norway. This will give a better understanding of the causality of the relationship between a financial crisis and protectionism.

The significance of joining the GATT will be tested, adding a dummy variable in model (iii)

(iii) $$y_t = \alpha + \beta' x_t + \delta_1 1\{FC\} + \delta_2 1\{EXC\} + \delta_3 1\{GATT\}\varepsilon_t$$

The GATT dummy indicates the year for when Norway joined the GATT:

$$\delta_3 1\{GATT\} = \begin{cases} 1\ if\ a\ member\ of\ GATT \\ 0\ otherwise \end{cases}$$

4. Empirical results

The following Chapter addresses the two objectives: how and why a financial crisis affects the level of average protectionism in Norway.

4.1. *How: financial crisis and mapping of protectionist cycles*

Figure 2 (SSB.no, 2014) shows cycle deviations of Norwegian AVE for the years 1866 to 2012 as deviations from HP-filtered trend (from now just called trend). It is evident that the highest positive deviations from trend and the development leading to these surges often cohere well with the development of the Norwegian financial crisis as pre-defined in table 1.

Surges are observable in 1886, 1908-10, 1922 and 1926, 1933-34 and 1939, and 1995. There is also a sharp positive deviation from trend in 1944-45 but it is short lasting and is followed quickly by a negative deviation. Negative deviations are observable preceding these surges, in particular in the years between 1915 and 1922. These observations show signs of a counter-cyclical relationship between protectionism and a financial crisis.

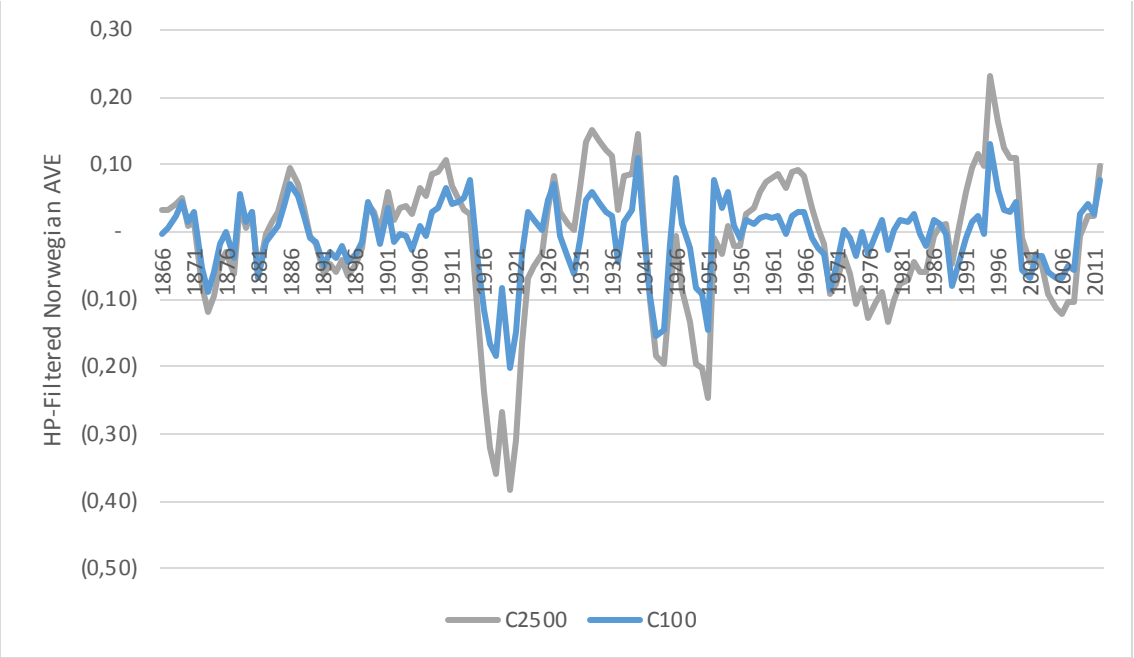
The relationship is not perfect. The results from figure 2 show a positive deviation from trend during the late 1950s to the mid-1960s. This shows that variables other than a financial crisis affect the average level of protectionism. In this particular case, the Norwegian authorities replaced many specific tariffs with ad valorem tariffs as part of an update of the Norwegian tariff system. This change increased the custom duties (SSB, 1965).

There is also a discrepancy between the cycle with a smoothing parameter of 100 and that of 2500 in the years preceding the banking crisis. While, by making the trend line smoother, it is possible to discover a negative deviation from trend the cycle with a lambda of 100 shows a positive deviation.

Since Norway has often applied specific tariffs rather than ad valorem tariffs, it is likely that the calculated AVE rates have moved with inflation. That is, as the specific tariff remains constant while the import value in kroners will move with inflation. To investigate this possibility, cycle deviations from trend of a deflated Norwegian AVE rate (following Lehmann and O'Rourke, 2011) is added in appendix 2. The cycles follow the same pattern as in figure 2.

The following Section elaborates upon the different financial crisis in Norway. It will serve as an indicator to help understand the causal relationship between a financial crisis and protectionism in Norway.

Figure 2 Norwegian AVE gaps as cycle deviations from HP-filtered trend 1866-2012



Source: SSB (1880-2013), Norwegian Statistical Yearbook from 1880-2013, in tables: "Imports and Exports." Pdf-files covering all years are available from SSB.no (2014).

The Long Depression (1875-1888/93) and the Christiania Crisis (1899-1905)

The actual AVE rates in table 7 indicate that the Long Depression triggered a surge in protectionism in Norway. Between the onset of the Crisis and the peak in AVE in 1875 the average AVE rate increased by 4.5 percentage points.

Table 7 Norwegian AVE rates for selected years between 1875 and 1905

Year	AVE
1875	8.80%
1878	11.0%
1881	8.90%
1886	13.3%
1891	9.4%
1898	11.8%
1901	12.2%
1905	10.8%

Source: SSB (1880-1906), Norwegian Statistical Yearbook from 1880-1906, in tables: "Imports and Exports." Pdf-files covering all years are available from SSB.no (2014).

From figure 2 a negative deviation from trend is observable before the Long Depression, with the lowest point in 1873. The Long Depression was, as the name reveals, long but not particularly deep. The downturn was not consistent. Instead, there was a series of setbacks, peaking at the end of the 1870s, the beginning and end of the 1880s and early in the 1890s

(Grytten & Hunnes, 2010). These dates cohere well with the cycles of protectionism as seen in figure 2.

The AVE rates declined (as compared to trend) before the Long Depression was over and did not rise again as a result of the new setback in the early 1890s. This tells the story of a positive relationship between a financial crisis and protectionism although the relationship is not perfect.

The role of the currency is assumed, in the endogenous protection model, to play a role in determining the average level of protectionism in a country. During this period, Norway significantly changed its monetary policy. Norway changed its reference system from silver to gold in 1874. As several other countries took the same approach the value of the silver depreciated and Norway got less gold for its silver (ibid).

Secondly, the quotient system used in Norway required banks to hold at all times 40 % of total credit as metal reserves. Mixed with the lower level of gold in the economy, as compared to the previous amount of silver, less credit could be supplied to the consumers. The government had to require high interest rates to keep the demand for money low (ibid).

The AVE rate started increasing from 1874, although it stays below trend until a few years later. This increase is visible in figure 2. Appendix 3, with the actual AVE rate and the trend line from which the cycle deviation is calculated, shows this even clearer. The quotient system was replaced by the difference system in 1892 allowing for more money to be issued. From that time on and until the end of the 19th century the AVE stayed below the trend line. Still, the AVE rate reached below the trend line already in 1890.

For the preceding financial crisis, the Christiania Crisis, no particular cycle-pattern appear to be evident. Figure 2 shows a small positive deviation from trend in 1901. However, the AVE rate increases and decreases as compared to trend almost annually during the Crisis. That is visible from the small tags in figure 2. The actual AVE rate, from table 7 above, saw a decrease of 0.7 percentage point between the onset of the Christiania Crisis in 1899 and the end in 1905.

The After-War Crisis (1921-1928) and the Great Depression (1930-1933)

After the First World War, Norway aimed at a liberal trade policy with low tariff rates. After several years of war these countries were in need of imports to satisfy the increasing demand for goods. They largely depended on imports from the USA (Grytten, 2002).

Drawing on evidence from empirical results, table 8 shows that the average tariff rate in Norway was as low as 3.39% in 1920. The negative deviation of AVE rate from its trend is clearly

visible in figure 2 above. This development came to a halt at the beginning of the 1920s and tariff rates started to deviate positively from trend. The average level of protectionism in Norway intensified significantly during the inter-war years, with an increase of 12.19 percentage points between 1920 and 1933. See table 8.

Table 8 Norwegian AVE rates for selected years

Year	AVE (custom duty)
1913	9.24%
1920	3.39%
1922	5.80%
1924	8.10%
1927	11.92%
1930	10.65%
1933	15.58%

Source: SSB (1914-1934), Norwegian Statistical Yearbook from 1914-1934, in tables: "Imports and Exports." Pdf-files covering all years are available from SSB.no (2014).

The depression was particularly severe in Norway and the severity was sustained by a deliberate pro-cyclical monetary policy. In 1921, the Norwegian government attempted to reach the pre-war par value of gold, following the lead of its important trading partner the UK. For the Norwegian Kroner to reach this par value it had to appreciate significantly, leading to longer periods of deflationary policy (Grytten & Hunnes, 2010).

Table 9 shows the exchange rate of the Norwegian Kroner in percent of its par value. In 1926, the exchange rate reached above the 80 % level and continued to appreciate until the 1930s. This policy was partly given up in the 1930s, as a response to the intensified depression, and the Norwegian Kroner was allowed to depreciate. Table 9 shows this sharp depreciation as compared to the par value between 1930 and 1932.

Table 9 Exchange Rate of the Norwegian Kroner in Percent of the Par value (=100)

Year	Exchange rate in percent of par value, annual averages
1920[1]	61.7
1921[1]	55.6
1926[2]	83.3
1927[3]	97.2
1928[3]	99.6
1929[4]	99.56
1930[4]	99.85
1932[5]	67.18

Source: SSB (1923-1933), Statistical Yearbook for Norway between 1923 and 1933.
[1](year 1923, p.274) [2](year 1926-1927, p.236) [3](year 1929, p.256) [4](year 1931, p.270) [5](year 1933, p.251)

The onset of the Great Depression gave rise to a wave of protectionism internationally. This surge in trade protectionism was used as an example to warn countries during the Great Recession to resist a similar turn in trade policy. Norway followed this trend in the 1930s. In addition to allowing for a sharp currency depreciation, the Norwegian tariff rate was raised significantly over a few years. Between 1930 and 1933 alone it augmented by almost 5 percentage points (4.93%, cf. table 8). This positive deviation is evident in figure 3, indicating the largest deviation from trend during the years 1915 and 1959.

Figure 3 Norwegian AVE rates between 1915 and 1960 and HP-trend for λ100 and λ2500

Source: SSB (1916-1961), Norwegian Statistical Yearbook from 1916-1961, in tables: "Imports and Exports." Pdf-files covering all years are available from SSB.no (2014)

The pressure for protectionism in Norway was fortified by a semi-public campaign promoting the sales of Norwegian products. The slogan read: "Buy Norwegian". This appeal was published in all Norwegian newspapers in 1931 and included signatures by numerous important personalities in Norway, including the rector at the University of Oslo, the director of the Central bank and 25 nation-wide organizations. This lobbying towards protectionism gained political support and was signed by the prime minister and the president of the parliament (Grytten, 2002).

Despite this increase in the AVE rate, it has to be remembered that Norway, as a small and open economy, still was more liberal than may Western European countries and the USA (ibid).

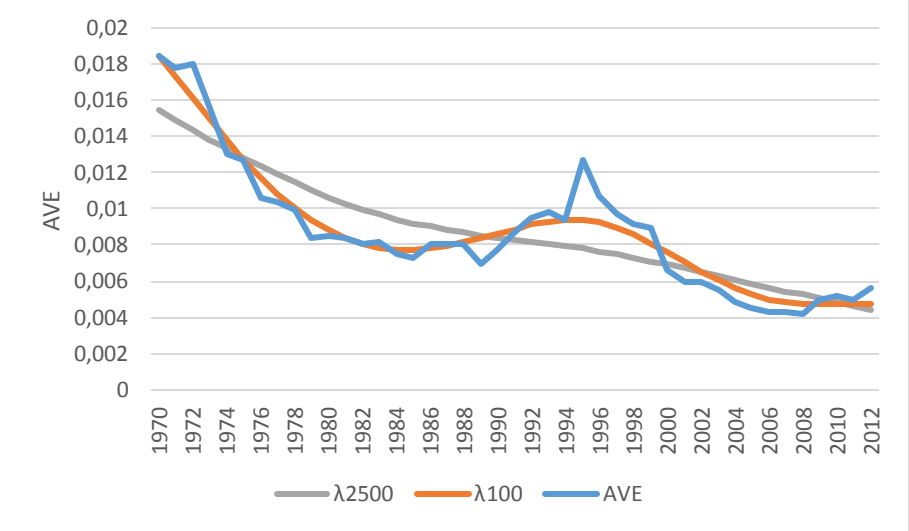
The Banking Crisis (1987-1993)

Investigating the trend line in figure 3 above it is clear that the AVE rate increased continuously until the 1940s. Thereafter a stable decreasing trend is visible. This development creates a clear U-form, with the maximum point in the mid-1930s.

Before the Second World War, Norway did not have any particular regulation of foreign trade (with the exception of a few agreements on quotas). During the war, world trade collapsed. The years exceeding this war saw a wave of international organizations being established, with the goal of re-stabilising world trade. The GATT was ratified by several countries, including Norway. This included concrete agreements on tariff reduction, and other agreements aimed at reducing world trade restrictions (SSB, 1965). See appendix 1 for an overview over these agreements.

The years leading up the banking crisis saw, if compared to the smoothest cycle in figure 2, several negative deviations from the otherwise decreasing trend. Figure 4 shows the actual AVE rates as deviations from trend. The AVE rate lies below both trend lines during the complete period although it is very close to the trend with a smoothing parameter of 100.

Figure 4 AVE Rates Between 1970 and 2012 and HP-Trend for λ100 and λ2500



Source: SSB (1971-2013), Norwegian Statistical Yearbook from 1971-2013, in tables: "Imports and Exports." Pdf-files covering all years are available from SSB.no (2014)

The oil chocks in the 1970s seriously affected that decade and the next in Norway, with a sharp decline in oil prices per barrel. During the Banking Crisis, Norway saw a sharp devaluation of the currency and tight monetary and fiscal policy. The Norwegian trade suffered significantly and moved from high surpluses to large deficits (Grytten & Hunnes, 2010). Appendix 4 and 5

illustrate the cycle deviations from trend of both the Norwegian CPI level and the import penetration rate. A deflation during the 1970s and the drop in import penetration are clearly visible in these figures.

Despite the presence of international institutions and low tariff rates, figure 4 reveals a large positive deviation from trend around 1995. Re-investigating figure 2 on cycle deviations this period saw the largest positive deviation from trend, reaching a summit in 1995.

Quantifying this with absolute values, table 10 shows a small increase in AVE rate of 0.5 percentage points in the years between 1985 and 1995. While this increase is not impressive, relatively to the general decreasing trend, the aftermath of the Banking Crisis saw a large surge in AVE rate. This lends support to the theorem of a counter-cyclical relationship between protectionism and a financial crisis.

Table 10 AVE Rates for Selected Years between 1985 and 2012

Year	AVE (custom duty)
1985	0.73%
1986	0.80%
1991	0.87%
1993	0.98%
1995	1.27%

Source: SSB (1986-1996), Norwegian Statistical Yearbook from 1986-1996, in tables: "Imports and Exports." Pdf-files covering all years are available from SSB.no (2014)

The Great Recession (2007-)

The Great Recession saw only a small surge in protectionism of 0.12 percentage points between 2005 and 2012 (see table 11). This small increase is hard to spot in figure 2 of cycle deviations and in figure 4 above. Appendix 6 includes a graph showing the actual AVE rate and the deviation from trend covering the time period 1995-2012. The small surge is visible in that graph, however, evidence during the next years is necessary to see if this is just a coincidence or a planned increase.

Table 11 AVE Rates for Selected Years between 2000-2012

Year	AVE (custom duty)
2000	0.67%
2005	0.45%
2008	0.41%
2010	0.52%
2012	0.57%

Source: SSB (1986-1996), Norwegian Statistical Yearbook from 1986-1996, in tables: "Imports and Exports." Pdf-files covering all years are available from SSB.no (2014)

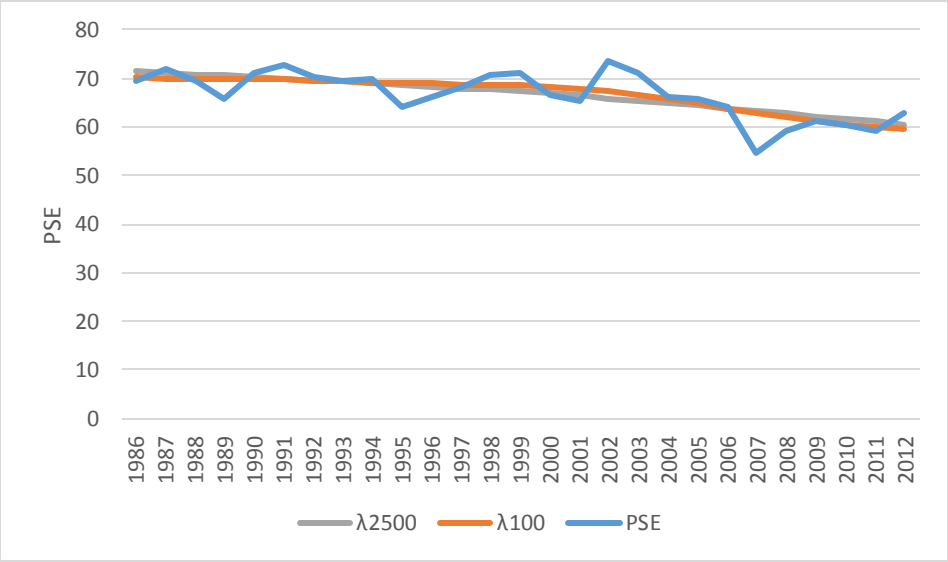
One apparent change that created turmoil in the Norwegian news in 2010 was the change from specific to ad valorem import duties for liquid mild and cream. WTO's policy review on trade policy in Norway calls this a conscious move to increase the border protection (WTO, WT/TPR/S/269). This provides evidence that the Norwegian levels of protectionism in terms on AVE rates still react to a financial crisis. However, the surge is small and might not provide support for a causal relationship anymore.

The Great Recession was not as hard on Norway as on other western countries. The Norwegian government was able to prevent the external chock that hit Norway in 2008 from creating too much damage and ensured financial stability (ibid). It is possible to speculate that, if the crisis had hit Norway harder, the deviation from trend might have been larger.

PSE rates

As a comparison to the AVE rate, figure 5 (OECD.Stat, 20123 shows Norwegian PSE rates and its trend line. The same conclusion cannot be drawn from the PSE rates. The PSE rates move below the trend line in 1995 and above in 2002. A sharp negative deviation from trend in 2007 before it increases again could however, maybe indicate a reaction to the Great Recession.

Figure 5 PSE Rates between 1986 and 2012 and HP-Trend for λ100 and λ2500



Source: (OECD.Stat, 2013)

4.2. *Descriptive data of the OLS models*

In the following Chapter, a coefficient is considered significant if it passes the five percent level. In the text percentage change refers to logarithmic and first differenced variables.

Pearson Correlations

The correlation matrix in table 12 shows Pearson correlations between the Norwegian AVE rate and variables from the basic regression model with percentage change and as deviation from trend. Some additional variables are inserted that might be used to extend the model.

The financial crisis dummy and the AVE rate are positively and significantly correlated both when measured against the unadjusted AVE rate and against percentage changes in AVE rate. This lends support to a counter-cyclical relationship between a financial crisis and Norwegian protection, however, it does not provide proof of a causal relationship. This variable is not significant at a five percent level when measured as deviations from trend.

Unadjusted, all variables correlate significantly with AVE. This is expected in a time series model as time often has high explanatory relevance. Therefore, results from the first differenced variables might be of higher interest.

In all of the models, CPI, unemployment and the USA AVE rate correlate significantly with the Norwegian AVE rate, with the expected sign from the endogenous protection model. GDPc only has a significant effect on percentage change in AVE, with a negative coefficient. The fixed exchange rate dummy has a positive, significant, effect on percentage changes in the AVE rate.

Additional variables from other theories on protectionism, gross investments and average wage do not show any significant correlation with the AVE rate. The interest rate correlates positively when lagged by 1. Monetary volumes measured with M2 (broad money) and M0 (narrow money excluding treasuries) are highly significant and reduces the AVE rate when measured as deviations from trend.

Table 12 Pearson Correlation between AVE Norway and determinants (Norway). The determinant is, in all columns but for unadjusted variables, adjusted with its logarithmic value and first differenced

Independent Variables	Unadjusted variables	Logarithmic and first differenced variables	Logarithmic and first differenced. Determinants lagged by 1	HP-Filtered cycles	HP-filtered cycles, lagged by 1
Financial crisis dummy	0.192 **	0.314 ***	-	0.154*	-
Lagged version of AVE Norway	-	-	0.214 **	-	0.893 ***
GDPc	-0.813 ***	-0.163 *	-0.202 **	0.160 *	0.150 *
CPI	-0.731 ***	-0.481 ***	-0.269 ***	-0.454 ***	-0.314 ***
Unemployment rate	0.688 ***	0.327 ***	0.328 ***	0.530***	0.606***
Import penetration	-0.760 ***	-0.087	0.129	0.113	0.657

AVE the United States	0.893 ***	0.086	0.159 *	0.688 ***	0.736***
NOK/GBP	0.616 ***	-0.041	0.017	0.163*	0.170*
NOK/USD	-0.760 ***	-0.032	-0.016		
GATT dummy	-0.474 ***	0.017	-	0.073	-
Fixed Exchange rate dummy	0.223 ***	-0.178 **	-	0.110	-
Gross Investments	-0.818 ***	-0.051	-0.051	-0.080	-0.132
Average Wage	-0.849 ***	0.018	0.041	-0.152	-0.064
M2	-0.570 ***	0.013	0.016	-0.363 ***	-0.575 ***
M0 excl. treasury	-0.622***	-0.013	-0.006	-0.661***	-0.234 ***
Interest Rate	0.261 ***	0.092	0.233***		

Source: See table 5 for variables in the endogenous protection model. For Gross Investments see Grytten (2004b), for M2 and M0 see Klovland (2004), for the interest rate see Klovland (2007) and for wages see Grytten (2007)

* p<0.1
**p<0.05
***p<0.01

Adjusting the OLS model

In the model for percentage change, all the variables including the determinant are first differenced and adjusted by its logarithmic value. Appendix 7.1 shows residual plots for the OLS model when variables are unadjusted and appendix 7.2 shows residual plots for the OLS model when variables are first differenced. These models do not pass the Anderson Darling statistics for Normality nor the Durbin Watson test for autocorrelation. They are not stationary and might create biased coefficients.

The model with both logarithmic and first differenced variables fits the criteria better (appendix 7.3). The GDPc is lagged by one as suggested by the person correlations, and the NOK/GBP by three. These were also the only significant versions of these two variables. Appendix 8.1 shows the residual plots for the model of percentage change including these adjustments, used in table x.

The model that uses cycle values as deviation from HP-filtered trend passes the above mentioned tests without the need of first differencing the data. Appendix 8.2 shows the residual plot for the model of deviations from trend with these adjustments, used in table 15 below.

Table 13 shows the results of the endogeneity test. In the case of inflation the previous year's AVE rate significantly reduce the present year's inflation rate. See appendix 9 for this test. This will be taken into consideration when analysing the data.

Table 13 Results for hypothesis testing the exogeneity of the determinants from table 4

Hypothesis	**Result**
H1: Norwegian AVE rates do not cause changes in the level of real GDP per capita	Do not reject
H2: Norwegian AVE rates do not cause changes in the level of unemployment	Do not reject
H3: Norwegian AVE rates do not cause changes in the level of import penetration	Do not reject
H4: Norwegian AVE rates do not cause changes in the CPI level	Reject
H5: Norwegian AVE rates do not cause changes in the U.S: AVE rate	Do not reject

Source: See table 5 that lists sources for all the variables

4.3. *The Time Series Regression Models*

Two models will be investigated, one that covers deviations from trend and one that investigates percentage change in the Norwegian level of average AVE rates. The phrase "conditioned upon a financial crisis" refers to the variables multiplied by the financial crisis dummy.

4.3.1. Deviations from trend, with the Norwegian AVE rate as the dependent variable

In table 14, the OLS model with HP-filtered cycles of AVE as a dependent variable and HP-filtered cycles of independent variables is reported. Any reference to variability and change in the determinants and dependent variable refers to deviations from trend.

Goodness of fit

Together, the variables in the basic model (i) explain 92.26% percent of the Norwegian AVE rate's deviation from trend. Most of this can be contributed to the previous year's AVE rate. Deviations from the AVE trend the previous year helps to explain, all else being equal, 0.7594% of the AVE deviations from trend in the current year. This indicates that the Norwegian protectionism level is persistent.

Appendix 10 shows the same model when inflation is removed as a determinant. Since inflation was found to be less exogenous and influenced by the AVE rate the effect without it in the model is of interest. Removing inflation from the model only decreased the goodness of fit by 0.33 percentage point. By itself, all else constant, a one percent deviation of the inflation rate from trend increases the AVE rate by 0.1343. This variable is not significant at a five percent level and most of the conclusions to the other variables remain the same. In the text, coefficients when excluding inflation are reported in brackets.

Coefficients of the endogenous protection model

When import penetration deviates from trend by 1, the Norwegian AVE rate deviates with negative 0.377 (-0.355). This is the opposite result of what was expected by the endogenous protection theory.

What is coherent with the theory is the U.S. AVE rate. Deviation from trend on the U.S. AVE rate last year by one results in deviations from trend also on the Norwegian AVE, of 0.3083 (0.2417). Together, last year's cycle change of the Norwegian and U.S. AVE rate explain most of the deviations from trend this year. Comparing manually the U.S. AVE cycle deviations (see appendix 11) to Norwegian AVE cycle deviations it is obvious that the two rates have followed a similar pattern.

Excluding inflation makes GDP per capita significant at a 10 % level, with a coefficient of 0.0228. This is an opposite result than what was expected from the theory. Still, this result did not pass the significance level of five percent. Including variables conditioned upon a financial crisis in model (ii) the GDPc becomes insignificant even at a 10 % level.

Having a fixed exchange rate does not give a significant result in neither of the models. Nor does a change in the NOK/GBP variable.

Financial crisis

The other change that the inflation rate made was on the significance of the financial crisis dummy (cf. appendix 10). The presence of a financial crisis increases cycle deviations from trend in both cases, however, in table 14 when inflation is included it is not possible to say that the effect of a financial crisis is significantly different from 0. Including the inflation rate multiplied by the financial crisis dummy in model (i) instead of the inflation rate alone in model gives the same result as when inflation is removed altogether.

The interpretation of import penetration, AVE USA_{t-1} and AVE $Norway_{t-1}$ remains the same in model (ii) as in model (i). The AVE rate in the U.S. only passes at a 10 % level. Instead, the U.S. Ave rate conditioned upon a financial crisis shows a significant result and increase AVE deviations from trend by 0.358% (0.331%).

The inflation rate is not significant at a five percent level when conditioned upon a financial crisis. The unemployment rate, not conditioned upon a financial crisis, becomes significant in model (ii). A change in deviations from the unemployment trend will increase cycles in AVE by 0.0671.

Table 14 Dependent variable: Norwegian AVE gaps as cycle deviations from HP-Filtered Trend with λ=2500

Independent Variables ***all variables are gaps as cycle deviations from HP-filtered trend**	**(i) Endogenous protection model**	**(ii) Variables ×FC dummy**	**(iii) Including membership in GATT**
Goodness of fit: Durbin Watson Anderson Darling	R2 : 92.26% R2(adj): 91.31% 1.87359>D_U P-value : 0.579	R2 : 93.14% R2(adj) : 91.87% 2.14584>D_U P-value : 0.803	R2: 86.40 R2(adj): 84.84% 1.93501>D_U P-value: 0.060
Financial crisis dummy	0.0122	-	0.0024
GDPc	0.207	0.171	0.287
Unemployment	0.0215	0.0671 ***	0.0225
CPI	0.1343 *	0.0538	0.1562 *
Import penetration lagged by 1	-0.337 ***	-0.400 ***	-0.451 ***
NOK/GBP	-0.0639	-0.004	-0.138
AVE United States lagged by 1	0.3083 ***	0.1588 *	0.4006 ***
AVE Norway lagged by 1	0.7594 ***	0.7608 ***	0.6782 ***
AVE trend line	0.141	0.202	0.232
Fixed Exchange rate dummy	-	-	0.0126
Membership in GATT dummy	-	-	0.0205
GDPc ×FC dummy	-	0.124	-
Unemployment×FC dummy	-	-0.0484	-
CPI ×FC dummy	-	0.406 *	-
Import.P lagged by 1 ×FC dummy	-	0.400	-
NOK/GDP×FC dummy	-	-0.167	-
AVE USA lagged by 1×FC dummy	-	0.358 **	-

Source: See table 5 that lists sources for all the variables

*p<0.1
** p<0.05
*** p<0.01

4.3.2. Percentage changes: logarithmic value and first differenced AVE Norway

Table 15 reports the results of the basic endogenous protection model in terms of percentage changes. Model (ii) includes the determinants multiplied by the financial crisis dummy. As all

the determinants are logged and first differenced all references to changes, variance or impact on the AVE rate refers to percentage changes.

Goodness of fit

Overall, the estimated regression equation in model (i) explains 62.19% of the variance in the Norwegian AVE rate. Adjusted for the number of determinants it explains 58.19% of the variance. Compared to the model with deviations from trend, this model has a lower goodness of fit. Adding the lagged Norwegian AVE rate in this model did not have any significant impact on the variance of the current AVE rate (see appendix 12). Consequently, other variables not included in this basic model explain around 40 % of the variance of the AVE.

For the same reason as above, appendix 13. shows the model from table 15 when inflation is excluded. When removing the inflation variable from the model the overall goodness of fit decreases (R2=50.94%). When included, a one percent change in CPI leads to a negative percentage change in the AVE rate, of -0.317%, which explains this drop in R2.

The interpretation of the other determinants from the endogenous protection model did not change by removing the inflation rate. Remember that the GDP per capita and import penetration are already adjusted for inflation.

Coefficients of the endogenous protection model

Applying the numbers from model (i) with the values excluding inflation in brackets, a one percent change in GDP per capita last year results in a -0.0378 (-0.0364) percentage change in the AVE rate this year. This is consistent with the endogenous protection hypothesis. It is only the lagged version of GDP per capita which has a significant effect on the AVE rate.

Percentage changes in import penetration also reduce the current AVE rate, with a percentage change of -0.0898 (-0.0577). This is the opposite results than what was expected from the endogenous protection theory, where import penetration was assumed to create demand for protection and as such a positive percentage change.

The only determinant that is significant and create a positive percentage change in the AVE rate is the AVE rate of the United States. The Norwegian rate responds with a 0.2165 (0.3562) percentage change to a one percentage change in the U.S. AVE rate. Appendix 14.1 tests the same model with lagged versions of the AVE USA rate. Including the lagged version of AVE USA to the model does not provide a significant result and the interpretation of the other coefficients remains the same. It is significant when the non-lagged version of AVE is removed, but with a smaller coefficient that the current year's AVE USA rate.

Having a fixed exchange rate does not have a significant effect on percentage changes of the Norwegian AVE rate. Lagging the percentage changes in the NOK/GBP bilateral exchange rate with three shows a significant result, but only at the 10 % level, of 0.000694% (0.000862%). Increasing values of NOK/GBP refers to a depreciation of the Norwegian Kroner. From the theory of endogenous protection an appreciation, not a depreciation was expected to increase the AVE rate.

Removing inflation from the model makes discrepancies from this relationship less likely, and the NOK/GBP lagged by three variable is significant at a five percent level. Norway applied a fixed exchange rate for most of the period until 2001. Multiplying the NOK/GBP lagged by three variable with a floating exchange rate dummy gives the same conclusion as when inflation was removed. The significance level of the other variables in the model stay unchanged. See appendix 14.2 In conclusion, it appears to be a small positive relationship between the Norwegian AVE rate and depreciation of the NOK/GBP exchange rate.

Financial crisis

The presence of a financial crisis, all else being constant, increases the AVE rate by 0.00203 %. However, this variable is not significant at a 10 % level. Therefore, in model (i) it is not possible to conclude that the effect of a financial crisis on percentage change in AVE *always* is significantly different from 0.

Excluding inflation from the model (cf. appendix 13) reveals that the presence a financial crisis has a significant effect on the percentage changes of AVE at a five percent level. The presence of a financial crisis triggers a 0.00295 percentage increase in the AVE rate. That is a small increase as compared to the model with inflation in figure 15.

When conditioned upon a financial crisis, in model (ii), import penetration and CPI do not confirm a significant relationship. The unemployment rate is still insignificant.

The NOK/GBP variable lagged by three is not significant at a five percent level. Instead, a deprecation of this rate conditioned upon a financial crisis is significant, although with a small percentage change of 0.001739 (0.002276).

The U.S. AVE rate conditioned upon a financial crisis shows a negative coefficient. That is, a one percent positive change in the U.S. AVE rate when there is a financial crisis in Norway results in a 0.211 (0.285) percentage decrease in the Norwegian AVE rate. However, it is only significant at a 10 % level unless inflation is excluded (cf. appendix 13)

Further, the previous year's percentage change in the AVE U.S. rate (in model ii b) does not affect the current changes in Norwegian AVE. This coefficient is positive (0.079) but not significant. Excluding inflation (cf. appendix 13) does not change that fact.

The GDP per capita variable changes sign of its coefficient when conditioned upon a financial crisis. A one percent increase in the GDPc rate last year will increase the AVE rate this year with 0.0424 (percentage change). This variable is only significant at a 10 % level. Including the lagged AVE rate instead of the non-lagged, the GDPc variable conditioned upon a financial crisis becomes significant, and causes a percentage change in the AVE rate of 0.0572.

Table 15 OLS Results. Dependent variable: First differenced and logarithmic value of Norwegian AVE rate between 1866 and 2012.

Independent Variables * **all variables are first differenced and transformed to its logarithmic value*	**(i) Endogenous protection model**	**(ii a) Variables × FC dummy**	**(ii b) Variables × FC dummy with lagged USA AVE**	**(iii) Including International institutions**
Goodness of fit: Durbin Watson Anderson Darling	R2: 62.19% R2(adj): 58.19% 1.83488>D_U P-value 0.414	R2 : 68.39% R2(adj): 62.85% 2.09507>D_U P-value 0.781	R2: 65.11% R(adj): 59.01% 2.03572>D_U P-value: 0.263	R2: 62.54% R2(adj): 58.08% 1.84389>D_U P-value 0.495
Financial crisis dummy	0.00203	-	-	0.00180
GDPc lagged by 1	-0.0378 ***	-0.0564 ***	-0.0571 ***	-0.0393 ***
Unemployment	-0.00180	0.00034	0.00154	-0.00201
CPI	-0.3717 ***	-0.03209 ***	-0.04166 ***	-0.03950 ***
Import Penetration	-0.0898 ***	-0.0960***	-0.0849 ***	-0.0928 ***
NOK/GBP lagged by 3	0.000694 *	-0.000290	-0.000500	0.000639 *
AVE_USA	0.2165 ***	0.3267 ***	-	0.2090 ***
AVE_USA lagged by 1	-	-	0.0862	-
Fixed exchange rate dummy	0.00036	-0.00028	0.00059	-0.00029
AVE trend line	0.0111	0.0133	-0.0013	0.0050
GATT Dummy	-	-	-	-0.00134
GDPc lagged by 1 ×FC dummy	-	0.0424 *	0.0572 **	-
Unemployment ×FC dummy	-	-0.00395	-0.00263	-
CPI ×FC dummy	-	-0.0285	-0.0222	-

Import Penetration×FC dummy	-	-0.0472	-0.0633	-
NOK/GBP lagged by 3 ×FC dummy	-	0.001739 **	0.001826 **	-
AVE_USA ×FC dummy	-	-0.211 *	-	-
AVE_USA lagged by 1 ×FC dummy			0.079	

Source: See table 5 that lists sources for all the variables

*p<0.1
** p<0.05
*** p<0.01

4.3.3. Investigating the role of the General Agreement of Tariffs and Trade (GATT)

Adding GATT membership in model (iii) as a dummy variable does not provide any further significant explanation to AVE deviations from trend (table 14) nor the percentage variance in the AVE rate (table 15).

Appendix 15.1 and 15.2 include the models in table 14 and 15 in two categories: 1866-1950 and 1950-2012. The Goodness of Fit decreases significantly for the model with percentage change in the post-GATT period as compared to the pre-GATT period (from 74.20% to 24.03%). Neither of the variables from the endogenous protection model significantly influence the variance in (percentage change) of AVE. The trend line is the only significant variable and triggers negative percentage change in the AVE rate of -0.0411.

In the models for deviation from trend, the goodness of fit remains high also in the post-GATT period. The previous year's AVE rate explains, all else being constant, 0.7768% of the variance of the current AVE deviations. The inflation rate becomes significant in the post-GATT scenario.

Although only significant at a 10 % level, the filtered import penetration rate conditioned upon a financial crisis explains 1.483 of the variance in the filtered AVE rate. The financial crisis dummy is not significant in the post- nor pre-GATT scenario. Neither is the fixed exchange rate dummy or the NOK/GBP variable.

4.3.4. Expanding models

Appendix 16.1 and 16.2 show the OLS model (i) with several additional determinants, identified by other theories of protectionism to create variance in the average level of protectionism. These variables are also connected to a financial crisis, in particular the monetary volumes and investments. Those variables are assumed to increase before a crisis and decrease with the onset of a panic.

Filtered monetary volumes (M2) correlates significantly and negatively with the Norwegian AVE rate (-0.363 and lagged -0.575). It is not possible to conclude a causal relationship as the variable was not significant in the OLS model (c.f. appendix 16.1 and 16.2).

The other variables showed no significant results, whether calculated as cycle deviations from trend nor as percentage annual change.

5. Elaboration upon findings

Measured as deviation from trend it appears that the average level of protectionism in Norway often, but not always, moves counter-cyclically with a financial crisis. This interpretation can also be taken, qualitatively, for intentional devaluations of the Norwegian currency. Many of the determinants contradict the endogenous protection theory or are insignificant. Following other "great powers" seems to be the most viable solution for why the AVE rate often has moved with a financial crisis.

5.1. *How?*

When mapping HP-filtered cycles as deviation from trend it becomes evident that the average level of protectionism, here measured as the AVE rate, often begins to deviate positively from trend with the onset of a financial crisis. Smaller or larger increases in the actual AVE rate have occurred during all of the financial crisis with the exception of the Christiania Crisis. This provides a rough proof that protectionism in Norway has tended to move counter-cyclically with a financial crisis.

This finding is visible in the OLS regression models, through the financial crisis dummy. This dummy is denoted in both models with a positive coefficient. That is, the presence of a financial crisis increases the AVE rate through either a percentage change or a deviation from trend. Stand-alone, its Pearson correlation coefficient is significant and positive. In the OLS models, this dummy is not significant and therefore it is not possible to conclude that a financial crisis always increases the level of protectionism.

This was suspected after investigating the Christiania crisis, which saw no countercyclical relationship. Although the financial crises in Norway have had many similarities and followed largely the development of a crisis as established by Kindleberger (cf. definition and see Grytten and Hunnes, 2010), there are differences among them. Kindleberger and Aliber (2011) said that a financial crisis often spreads internationally but the channels through which it spreads change from crisis to crisis. This can explain why the strength of the AVE-cycle differs between financial crises.

The significance of a financial crisis seems to fluctuate with inflation. This is not surprising. A financial crisis is often associated with serious deflation, while the preceding boom often sees sharp inflation (cf. definition of a financial crisis). The inclusion of inflation might have outweighed the effect of a financial crisis.

5.2. *Why?*

Having established that (relative to trend) protectionism have often moved with the financial crises, the interesting question is why. A distinction in the interpretation of some of the variables occur is the OLS model of percentage change as compared to the OLS model measuring deviation from trend.

An explanation to this might be the high coefficient of the proceeding year's AVE deviations from trend on the dependent variable. From the figure showing AVE cycles as deviations from trend (cf. figure 2), it is evident that the cycle deviations are relatively enduring. That is, the AVE values deviate positively or negatively from trend for many years at a time.

Investigating the plot of the logarithmic and first differenced AVE rate (see appendix 17), shows that the percentage changes in the AVE rate are less enduring. Contrary to deviations from trend, these values fluctuate more rapidly. Negative percentage changes occur during most of the financial crisis despite the fact that the actual AVE level is relatively high as compared to "normal times." It is therefore logical that the interpretation in the two models differs for some of the variables. This insight is necessary for some of the interpretations below.

5.2.1.Import penetration

Both the models of percentage change and deviation from trend find that the Norwegian level of protectionism decreases with import penetration. A negative sign on the coefficient of import penetration contradicts the pre-assumed relationship in the endogenous protection model. In accordance with the theory, lobby groups are expected to pressure for more protection when their business is threatened by foreign competitors.

Conversely, a negative coefficient is consistent with the empirical investigations of Gawande et al. (2011). Gawande et al. (2011) interpret the negative coefficient in their study as a result of tighter international trade and production linkages in present time. Norway, as a small open economy, has depended upon imported final goods and imports to production for a longer time-period than larger developed countries.

Proof of this is added in appendix 18, which shows the large dependency rates of imports to various Norwegian sectors in the 1950s. Due to this dependency, increased protection would make the imported goods more expensive. This will do more harm than good to many industries. Plotting the data for import penetration into a diagram (cf. appendix 5) shows that the amount of imports, as compared to domestic consumption, has increased constantly over the years. It is therefore highly likely that the negative relationship will continue.

The effect of import penetration during a financial crisis is not significantly different from zero. This result is somewhat surprising due to the high significance during the whole time-period.

During a financial crisis, the level of import quantity and value of imports are assumed to decrease (cf. definition). In the regression model, this would trigger a positive AVE-deviation from trend and positive percentage changes in the AVE rate, since the coefficient is denoted with a negative sign. The lack of significance during a financial crisis indicates that a drop in import penetration do not trigger such an increase in protectionism.

Increasing prices for imported goods, when import volumes in general are decreasing, will be extremely costly for the import dependent industries. Rather, one could have expected a positive coefficient during times of financial crises. That other variables such as the U.S. AVE rate have been proved to increase the Norwegian AVE rate might have offset such a result.

In conclusion, the import penetration rate is not a contributor to the, although imperfect, counter-cyclicality spotted in the figures in Chapter 4.1.

5.2.2. Inflation

Inflation results in a negative and significant percentage change in the AVE rate. This indicates that, when domestic prices increase (in percent) the demand for protectionism decreases as a way of offsetting this price increase. As it is established that Norway largely depends on imported goods, a decrease in tariffs arguable has an important effect on the domestically price level. This statement was proved in table 13 above.

A more technical consideration has to be taken into consideration. Since the Norwegian authorities have used a majority of specific tariffs rather than ad valorem tariffs, the AVE will to some extent automatically move with inflation. While a specific tariff is constant (e.g., per kilogram) import values in kroners will move with inflation. When calculating the fraction of specific tariff versus import values, the AVE rate will automatically decrease in periods with inflation and increase in periods with deflation. As such, protectionism measured with AVE might move countercyclically to a financial crisis without being a response to higher demand for protectionism.

Deflating the AVE rate did not change the interpretation of the HP-filtered cycles (cf. appendix 2). In the case of deviations from trend, the inflation rate has a positive coefficient, however, this result is not significant, nor did it have any particular effect on the overall

goodness of fit of the model. It appears that the percentage changes in the AVE rate due to inflation is the result of applying special tariffs rather than ad valorem tariffs. That is, since the effect of inflation is not large enough to cause deviations from the AVE trend, it is possible to suggest that inflation does not trigger much demand for protectionism, and that the significant effect on percentage change is due to technicalities.

5.2.3. Unemployment

Increased unemployment only significantly affects variation in the AVE rate in model (ii), deviations from trend (cf. table 14). This indicates that unemployment in Norway has to deviate significantly and positively to trigger a response for protection.

Annual fluctuations and percentage change do not cause a (causal) demand for protection. Unemployment might increase by a certain percentage in one period but still lie below the trend line. In that case, the unemployment problem might not be perceived as significantly threatening. When unemployment reaches above the average trend, the general and specific interest groups might be more aware of possible consequences for domestic job creation.

In addition, this result was only significant in model (ii) when the financial crisis dummy variable was included. Since a financial crisis often fortifies the problem of unemployment, it is logical that the presence a financial crisis dummy in the model reinforces the effect of unemployment on the variance in the AVE rate.

GDPc

Percentage change in the GDP per capita rate results in a negative percentage change in the AVE rate, as suspected by the theory and from most of the empirical research. A significant effect of GDPc on AVE deviations from trend was not found. This is the opposite of what was found for unemployment.

The sign of the (percentage change) GDPc coefficient becomes positive when the variable is multiplied with the financial crisis dummy. This change can be understood with simple addition. The percentage change in GDPc during a financial crisis is expected to be negative. When adding a negative variable to the, now positive, coefficient the percentage change in the AVE rate will still decline. The relationship between a percentage change in the GDPc rate and the AVE rate is therefore consistent, and increases AVE during a financial crisis.

In essence, despite the significant effect of GDP per capita on percentage changes in the AVE rate, the GDP per capita is not a contributor to creating cycle deviations from trend and the counter-cyclical relationship seen in Chapter 4.1. 0

5.2.4. Exchange rate

A fixed exchange rate is negatively (Pearson) correlated with percentage changes in protectionism. A causal relationship is not found, as this dummy variable remains highly insignificant when included in the OLS model. As Norway used a fixed exchange rate, with only a few exceptions until the 2001, this is not surprising.

Evident from Chapter 4.1. is that the Norwegian government intentionally allowed for a devaluation of the currency, to diminish the pressure the contractive policy had created, after the Long Depression and at the end of the Great Depression. A devaluation of the currency was used also during the Banking Crisis. The theory of endogenous protection assumed that a fixed exchange rate increases trade protectionism as a counter repose to changed competitiveness. In Norway, since the exchange rate was not kept fixed, the devaluation in itself improved the competitiveness.

It is clear, from the above comment, that the currency exchange, which is a protectionism measure (cf. figure 1), was used actively as a method to decrease the disastrous effects of the financial crisis, and to increase Norway's competitiveness.

A causal relationship between the two measures of protectionism, AVE and currency exchange, could therefore be expected. That is, by actively using the currency exchange, further tariff barriers might not be necessary to protect the domestic market. Eichengreen and Irwin (2009), who found that the Scandinavian countries turned less to protectionism than gold block countries during the 1930s, back this conclusion. However as these actions were not random but subject to a specific political action it is not possible to draw a causal conclusion from the use of the exchange rate on the AVE rate.

USA AVE Rate

In both models, the U.S. AVE rate explains a large and significant part of the variation in the Norwegian AVE rate today. This variable is also the only significant variable, at a five percent level, that explains positive deviations from trend during a financial crisis. This finding is consistent with the theory and with most empirical research. As a small open economy, it is logical that Norway follows the great powers.

It is doubtable that Norway increased its AVE rate to retaliate against the USA. As a small open economy Norway has a lower ability to affect world prices. It is likely that Norway followed the process of the influencers, setting low tariff rates during normal times and increase them because, and only when, the large countries did. If Norway decided to increase

the AVE rate alone, she would likely face a large retaliation from trading partners as an attempt to scare Norway to decrease the tariff rate again.

This can explain why the Christiania Crisis, which only had national reach, did not see the same surge in cycle deviations from trend as during the other Financial Crisis. It can also explain why, although the Norwegian AVE rate increased, the Norwegian trade policy was more liberal than other Western Countries and the United States during the inter war crisis (c.f. Grytten, 2002).

The model with percentage changes shows a negative coefficient of the U.S. AVE rate when this variable is multiplied with the financial crisis dummy. Excluding inflation, this variable is significant at a five percent level. This variable is insignificant when lagged, both with and without inflation. This is the opposite result as found when investigating deviations from trend as the U.S. AVE rate significantly triggered positive variation in the AVE rate as deviations from trend.

Percentage changes in the US AVE rate might not be perceived as equally threatening to the Norwegian export sector as a positive deviation from trend. That is, the rate might still lie below the trend line and be perceived as relatively low despite a positive percentage increase in year t. However, when the U.S. AVE rate is moving above trend it is perceived as relatively large. Since the previous year's AVE deviation from trend increase the deviation in the current year, the Norwegian AVE rate will continue to increase once it reaches above the trend line. The welfare loss might be large and thus trigger a higher AVE rate to try to restore this situation.

Summarized, the U.S. AVE rate is a significant contributor to the cycle effects seen in Chapter 4.1., and an increase in deviation from trend will create large positive deviations from trend also in Norway.

5.3. *Counter-cyclicality in the late 20th century?*

An interesting finding worth some elaboration is the deviation from trend during the Banking Crisis. Although the actual change in AVE rate was rather small as compared to previous years (0.5%), this period saw the largest cycle deviations from trend. The large positive cycle deviation can be explained by a "sharp" increase in AVE rate relatively to the already low rate.

The trend line from figure 3 above showed that the ratification of the GATT agreement clearly decreased the absolute level of AVE in Norway. Although the absolute level of AVE

is low, the tariff rate can still be elevated up until the bound rate allowing for deviations from trend.

In the post-GATT scenario (cf. appendix 15) the goodness of fit between the macroeconomic determinants from the endogenous protection model and percentage changes in the AVE rate largely decreased. The trend line is the only significant variable of those included and this is decreasing the overall AVE rate after GATT.

In the pre-GATT scenario, the macro-economic variables have the same explanatory significance as in tables 14 and 15, chapter 4. This shows that variables connected to a financial crisis do not explain much of the changes in the AVE level in present time, as they did before GATT. It also shows that the introduction of GATT made protectionism in Norway more resistant to macro-economic variables.

In model (ii), Post-GATT, deviations from trend, (although only at a 10 % level) the import penetration multiplied by the financial crisis dummy becomes large with a positive coefficient. This was not the case in table 14 or table 15 in Chapter 4, where the coefficient is negative. A possible explanation to this is the large trade deficits facing Norway during the Banking Crisis (cf. appendix 5). It is thus natural that the coefficient is positive, indicating that a decrease in import penetration decrease the average level of AVE.

Further, in the OLS model showing deviations from trend, the inflation rate becomes a significant variable in the post-GATT scenario as opposed to the pre-GATT scenario. Connecting this to the knowledge of cycle deviations from inflation-trend (cf. appendix 4) the connection is clear. The inflation rate deviates negatively from trend before 1986, connected to the oil chock, while it deviates positively from trend during the late 1980s and until 1996.

It appears therefore that the large cycle deviation from trend in the mid-1990s is a result of the inflation rate deviating positively from trend as compared to the sharp deflation following in the proceeding time-period. As a financial crisis is largely connected with a deflation it does not provide strong evidence for a counter-cyclical relationship between a financial crisis and the average level of protectionism after 1950.

6. Conclusions and suggestion for future research

The present dissertation intends to explain the overall research question: "*how and why do a financial crisis affect the level of average protectionism in Norway*?" It also intends to investigate if the interpretation has changes in time.

Partial evidence of a countercyclical relationship between the AVE rate and financial crisis is found. During each of these financial crises, with the exception of the Christiania Crisis, the AVE level deviated positively from trend following a period of negative deviations from trend. The After-War Crisis, the Great Depression and the Banking crisis saw the largest positive AVE-deviations from trend.

A countercyclical relationship between a financial crisis and protectionism was doubted in the introduction for small open economies due to the lack of ability to affect world price. Evidence of such a relationship seems nevertheless to exist, mostly because Norway is found to follow "the great power." Deviations from AVE-trend in the USA is the dominant reason for the positive deviations from trend in Norway, also during a financial crisis. The same interpretation can be applied to percentage changes in the AVE rates.

Norway followed the U.S. in both AVE-booms and AVE-busts. As a small open economy it makes sense that Norway choose to follow the influencers. If Norway decided to increase the AVE rate alone, she would likely face a large retaliation in return and be forced to decrease the AVE rate.

Increasing positive trend deviations from the unemployment rate is also found to cause positive deviations from trend in the AVE rate. This is a classical response to protect the domestic market from foreign competition. Import penetration on the other hand contribute to decrease the AVE rate rather than increasing it. This is due to the Norwegian industry's dependency on imported goods.

Despite an apparent relationship between a financial crisis and protectionism in Norway, it is not possible to confirm a causal countercyclical relationship in an OLS model. A reason for this is the low explanatory power of macro-economic variables on the average level of protectionism after the introduction of GATT. Another reason is the lack of an AVE increase during the Christiana crisis.

Further, the large positive cycle deviation from trend during the Banking Crisis can be explained by an increase in the inflation rate rather than the presense of a financial crisis. It

appears that the counter-cyclical relationship is partly broken as a response to the introduction of GATT.

6.1. *Suggestions for further research*

To broaden the understanding of how and why a financial crisis affect the level of protectionism today it is possible to gather data for less transparent, non-tariff barriers. It is evident that the AVE rate in Norway on average is low except for in certain industries. As such, a bigger threat comes from measures of protectionism that are less apparent to us today.

Work on calculating and understanding various versions of NTBs are still under progress, and a thorough investigation of data when they become available will give valuable insights. Comparing such results to that of the AVE can indicate if a countercyclical relationship exists for other measures than tariffs.

Further, it will be interesting to compare the results of Norway to that of other small open economies. This will make it possible to give a conclusion on the external validity of the results in this report.

7. List of references

Abboushi, S., 2010. Trade protectionism: reasons and outcomes. *Competitivenss Review: An International Business Journal*, 20(5), pp. 384-394. Emerald Group Publishing Limited.

Backus, D. K. & Kehoe, P. J., 1992. International Evidence on the Historical Properties of Business Cycles. *American Economic Review*, 82(4), pp. 864-888.

Bagwell, K. & Staiger, R. W., 2003. Protection and the Business Cycle. *Advances in economic analysis and policy*, 3(1), 43 pages.

Bairoch, P., 1993. *Economics and World History: Myths and Paradoxes*. New York: Harvester Wheatsheaf.

Baldwin, R. E., 1985. *The Political Economy of US Import Policy*, Cambridge: MIT Press.

Blattman, C., Clemens, M. A. & Williamson, J. G., 2002. *Who Protected and Why? Tariffs the World Around 1870-1938*. Trinity College, Conference on the Political Economy of Globalization. 36 pages.

Boffa, M. & Olarreaga, M., 2012. *Protectionism during the crisis: Tic-for-tac or chicken-games?*, Université de Genève: Working Paper Series 12034. 7 pages.

Bohara, A. K. & Kaempfer, W. H., 1991. A Test of Tariff Endogeneity in the United States. *The American Economic Review*, 81(4), pp. 952-60.

Bown, C., 2004. On the Economic Success of GATT/WTO Dispute Settlement. *Review of Economics and Statistics*, Volume 86, pp. 811-823.

Bown, C., 2014. *Trade Policy Instruments over time*, Policy Research Paper No. 6757: The World Bank, trade and international research team. [Online].
Available at: http://www-wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/2014/01/23/000158349_20140123164208/Rendered/PDF/WPS6757.pdf
[Accessed 31 01 2014].

Bown, C. P. & Crowley, M. A., 2012. *Import Protection, Business Cycles, and Exchange Rates: Evidence from the Great Recession*, Chicago: Policy Reserach Working Paper 6038, The World Bank. 41 pages. [Online].
Available at: http://elibrary.worldbank.org/doi/pdf/10.1596/1813-9450-6038
[Accessed 31 01 2014].

Bradford, S., 2003. Protection and jobs: explaining the structure of trade barriers across industries. *Journal of International Economics*, 61(1), p. 19–39.

Broda, C., Limão, N. & Weinstein, D. E., 2008. Optimal Tariffs and Market Power: The Evidence. *American Economic Review*, Volume 98, pp. 2032-2065.

BusinessDictionary, 2014. *Protectionism: Definition*. [Online]
Available at: http://www.businessdictionary.com/definition/protectionism.html
[Accessed 31 03 2014].

Bussière, M., Pérez-Barreiro, E., Straub, R. & Taglioni, D., 2010. *Protectionist responses to the crisis: Global Trends and Implications*, Frankfurt: ECB, Occational Paper Series, No. 110. 52 pages.

Claessens, S. & Kose, M. A., 2013. *Financial Crises: Explanations, Types, and Implications*, s.l.: IMF working paper NO. 13/28. 66 pages.

Clemens, M. A. & Williamson, J. G., 2002. *Closed Jaguar, Open Dragon: Comparing Tariffs in Latin America and Asia before World War II*. Cambridge: National Bureau of Economic research. *33 pages*.

Cooley, T. J. & Ohanian, L. E., 1991. Cyclical Behaviour of Prices. *Journal of Monetary Economics,* Volume 28, pp. 25-60.

Correia, I. H., Neves, J. L. & Rebelo, S. T., 1992. Business Cycles from 1850-1950 - New Facts about Old Data. *European Economic Review ,* 36(2/3), pp. 459-467.

Costinot, A., 2009. Jobs, Jobs, Jobs: A "New" Perspective on Protectionism. *Journal of the European Economic Association,* 7(5), p. 1011–1041.

Crowley, M. A., 2011. *Cyclical Dumping and US Antidumping Protection: 1980-2001,* Chicago: Federal Reserve Bank of Chicago Working Paper (WP-2007-21, revised January 2011). 43 pages.

Davis, C. & Pelc, K. J., 2012. *Cooperation in Hard Times: Self-Restraint of Trade Protection.* [Online]
Available at:
http://wws.princeton.edu/system/files/research/documents/davis_cooperation_in_hard_times.pdf
[Accessed 07 04 2014].

Defraigne, J.-C., 2013. *European Economic Policy*. Louvain la Neuve: Louvain School of Management, LSMS 2060.

Dollery, B. & Whitten, S., 1998. An Empirical Analysis of Tariff Endogenity in Australia 1904-1974. *Economic analysis and Policy,* 28(2), pp. 213-229.

ECB, 2013. *Financial Stability Review, November 2013*. Frankfurt: European Central Bank.[Online]
Available at:
http://www.ecb.europa.eu/pub/pdf/other/financialstabilityreview201311en.pdf??6fd6719bc2d089c67c09358ebea3be31
[Accessed 07 04 2014].

Eichengreen, B., 1987. The anatomoy of financial crisis. *National Bureau of Economic Research. Working Paper,* Volume 2126.

Eichengreen, B. & Irwin, D. A., 2009. The slide to protectionism in the great depression: who succumbed and why?, *Cambridge: National bureau of economic research*. pp 871-897

Eitrheim, Ø., 2012. *Pengepolitikk i Norge i et historisk perspektiv: 1816-2016*. Bergen: NHH Forelesning 13. September 2012 (lecture at the Norwegian School of Economics).

European Parliament, 2013. *The European Economic Area (EEA), Switzerland and the North*. [Online]
Available at:
http://www.europarl.europa.eu/aboutparliament/en/displayFtu.html?ftuId=FTU_6.5.3.html
[Accessed 30 11 2013].

Evenett, S. J., 2009. Crisis-era protectionism one year after the Washington G20 Meeting. In: R. Baldwin, ed. *The Great Trade Collapse: Causes, Consequences and Prospects*. London: Centre for Economic Policy Reserach, pp. 37-47.

Evenett, S. J. et al., 2010. *The Resort to Protectionism During the Great Depression: Which Factors Mattered?,* Switzerland: Working Paper. 29 pages.

Feinberg, R. M. & Reynolds, K. M., 2006 . The Spread of Antidumping Regimes and the Role of Retaliation in Filings. *Southern Economic Journal,* 72(4), pp. 877-890.

Fingerand, K. & Schuknecht, L., 1999. *Trade, Finance and Financial Crisis,* Geneva: World Trade Organization. 61 pages.

Freund, C., 2009. The Trade Reseponse to Global Downturns. In: R. Baldwin, ed. *The Great Trade Collapse: Causes, Consequences and Prospects*. London: Centre for Economic Policy Research, pp. 59-71.

Frieden, J., 2009. Global trade in the aftermath of the global Crisis. In: R. Baldwin, ed. *The Great Trade Collapse: Causes, Consequences and Prospects.* London: Centre for Economic Policy Research, pp. 25-29.

Gallarotti, G. M., 1985. Toward a Business-Cycle Model of Tariffs. *International Organization,* 39(1) winter, pp. 155-187 .

Gawande, K., 1998. Comparing Theories of Endogenous Protection: Bayesian Comparison of Tobit Models Using Gibbs Sampling Output. *The Review of Economics and Statistics,* 80(1), pp. 128-140.

Gawande, K., Hoekman, B. & Cui, Y., 2011. *Determinants of Trade Policy Responses to the 2008 Financial Crisis.,* Policy research paper 5862: The World Bank, International Trade Department.

Gawande, K. & Krishna, P., 2001. *The Political Economy of Trade Policy: Empirical Approaches,* s.l.: NBER Working paper (2001-38).

Gawande, K., Krishna, P. & Olarreaga, M., 2012. Lobbying Competition and US Trade Policy. *International Economic Review,* 53(1), pp. 115-132 .

Goldsmith, R. W., 1982. *The National Balance Sheet of the United States,* Chicago.: University of Chicago Press.

Grilli, E., 1988. Macro-economic Determinants of Trade Protection. *The World Economy,* 11(3), pp. 313-326.

Grossman, G. M. & Helpman, E., 1994. Protection for sale. *American Economic Review,* 84(4), pp. 833-850.

Grossman, G. M. & Helpman, E., 1995. Trade Wars and Trade Talks. *Journal of Political Economy*, 103(4), pp. 675-708.

Grytten, O., 2004a. A consumer price index for Norway 1516-2003, 47-98, Chapter 3. In: Ø. Eitrheim, J. Klovlan & J. Qvistad, eds. *Historical Monetary Statistics for Norway 1819-2003.* Oslo: Norges Bank Occasional Papers no.35, 2004, pp. 47-98.

Grytten, O. H., 2002. *Norwegian Policy Response to the International Economic Disintegration During the Inter-War Years,* Bergen, Norway: Discussion Paper 23/02. Norwegian School of Economics and Business Administration. 24 pages.

Grytten, O. H., 2004b. The gross domestic product for Norway 1830-2003, 241-288, Chapter 6. In: Ø. Eitrheim, J. Klovland & J. Qvigstad, eds. *Historical Monetary Statistics for Norway 1819-2003.* Oslo: Norges Bank Occasional Papers no. 35. GDP for Norway by expenditure in fixed prices (million 2000-NOK) From 1830, pp. 241-288.

Grytten, O. H., 2007. Norwegian wages 1726–2006 classified by industry, Chapter 6. In: Ø. Eitrheim, J. Klovland & J. Qvigstad, eds. *Historical Monetary Statistics for Norway – Part II, Eitrheim, Ø., O. H. Grytten and J. T. Klovland (2007), "Historical Monetary Statistics for Norway – some cross checks of the new data", 385–434, Chapter 7 in Eitrheim, Ø., J.T. Klovland and J.F. Qvigsta.* Oslo: Norges Bank Occasional Papers No.38,, p. 343–384. Last updated: February 2014.

Grytten, O. H. & Hunnes, A., 2010. *A Chronology of Financial Crises for Norway,* Bergen: Norwegian School of Econoimcs and Business Administration. 35 pages.

Hansen, W. L., 1990. The International Trade Commission and the Politics of Protectionism. *American Political Science Review,* 84(1), pp. 21-46.

Heo, Y. & Chung, Y., 2008. The Endogeneity of Tariffs in Korea. *Journal of International Economic Studies,* Volume 22, pp. 113-122.

Imai, S., Katayama, H. & Krishna, K., 2008. *Is protection really for sale? A survey and directions for future research,* s.l.: NBER Working Paper No. 13899. 28 pages.

IMF Staff, 2008. *Globalization: A Brief Overview.* [Online]
Available at: http://www.imf.org/external/np/exr/ib/2008/053008.htm
[Accessed 18 07 2012].

Irwin, D., 2010. Trade Restrictiveness and Deadweight Losses from U.S. Tariffs, 1859-1961. *American Economic Journal: Economic Policy 2,* pp. 111-133.

Irwin, D. A., 1998. Changes in U.S. Tariffs: The Role of Import Prices and Commercial Policies. *American Economic Review,* Issue 88, pp. 1015-1026.

Irwin, D. A., 2005. The Rise of U.S. Antidumping Activity in Historical Perspective. *The World Economy ,* Volume 28, pp. 651-668.

Irwin, D. A., 2011. *Peddling Protectionism: Smoot-Hawley and the Great Depression. Princeton, N.J:* :Princeton: Princeton University Press, 244 pages.

Johnson, R. C. & Noguera, G., 2009. *Accounting for Intermediates: Production Sharing and Trade in Value-Added*. Manuscript: Dartmouth College. 35 pages.

Kindleberger, C. P., 1995a. The United States and the World Economy in the Twentieth Century. In: *The World Economy and National Finance in Historical Perspective.* USA: The University of Michigan Press, pp. 15-36.

Kindleberger, C. P., 1995b. Business Cycles, Manias, and Panics in Industrial Societies. In: *The World Economy and National Finance in Historical Perspective.* USA: The University of Michigan Press, pp. 85-100.

Kindleberger, C. P. & Aliber, R. Z., 2005. *Manias, Panics, and Crashes: A History of Financial Crises*. 5 ed. New Jersey: John Wiley & Sons, Inc.

Kindleberger, C. P. & Aliber, R. Z., 2011. *Manias, Panics and Crashes: A history of Financial Crisis*. 6 ed. UK: Palgrave Macmillan.

Klovland, J. T., 2004. Monetary aggregates in Norway 1819-2003. *Eitrheim, Øyvind, Jan T. Klovland and Jan F. Qvigstad (eds), Historical Monetary Statistics for Norway 1819-2003, Occasional Papers No 35, Norges Bank, Oslo,* pp. 181-240.

Klovland, J. T., 2007. Short term interest rates in Norway 1818-2007. *Historical Monetary Statistics for Norway Part II Occasional Papers No 38, Norges Bank. Oslo: Eitrheim, Øyvind; Klovland, Jan T; Qvigstad, Jan F.,* pp. 42-108.

Knetter, M. M. & Prusa, T. J., 2003. Macroeconomic Factors and Antidumping Filings: Evidence from Four Countries. *Journal of International Economics,* Volume 61, pp. 1-17.

Krishna, P. & Mitra, D., 2008. Reciprocated unilateralism in trade reforms with majority voting. *Journal of Development Economics,* Volume 85, pp. 81-93.

Krugman, Obstfeld & Melitz, 2012. *International Economics: theory and policy*. 9 ed. Boston: Pearson Series in Economics, Addison-Wesley. 736 pages.

Krugman, P., 1991. Financial Crises in the International Economy. In: *International Aspects of Financial Crises*. s.l.:Martin Feldstein, pp. 85-109.

Lehmann, S. & O'Rourke, K. H., 2011. The structure of protection and growth in the late 19th century. *The review of economics and statistics, 93(2), pp. 606-616*

Magee, S. P., Brock, W. A. & Young, L., 1989. *Black Hole Tariffs and Endogenous Policy Theory: Political Economy in General Equilibrium*. 1 ed. New York: Cambridge University Press.

Magee, S. P. & Young, L., 1987. Endogenous Protection in the United States, 1900-1984. In: R. M. Stern, ed. *Trade Policy in the 1980s*. Cambridge: MIT Press, pp. 145-95.

Maggi, G., 1999. The Role of Multilateral Institutions in International Trade Cooperation. *American Economic Review*, Volume 89, pp. 190-214.

Maggi, G. & Rodriguez-Clare, A., 1998. "The Value of Trade Agreements in the Presence of Political Pressures. *Journal of Political Economy*, 106(3), pp. 574-601.

Melchior, A., Zheng, J. & Johnsen, Å., 2009. *Trade barriers and export potential: Gravity estimates for Norway's exports,* Oslo: Ministry of Trade and Industry, Norway. 47 pages.

Mitchell, B., 2003. *International historical statistics, Europe 1750-2000*. 5 ed. s.l.:Palgrave Macmillion.

Naoi, M. & Kume, I., 2011. Explaining Mass Support for Agricultural Protectionism: Evidence from a Survey Experiment During the Global Recession. *International Organization Foundation,* 65(Fall), p. 771–795.

NAPC-TPD, 2009. *Ad Valorem Equivalent in the WTO. Working Paper No 43*, Damascus: National Agricultural Policy Centre. [Online]
Available at: http://ageconsearch.umn.edu/bitstream/48586/2/43_ad_valorem_mb_en.pdf
[Accessed 06 02 2014].

Oatley, T., 2010. Real Exchange Rates and Trade Protectionism. *Business and Politics*, 12(2), pp. 1-19.

Odell, J. S., 1990. Understanding International Trade Policies: An emerging Synthesis. *World Politics*, 43(1), pp. 139-167.

OECD Newsroom, 2012. *Investment: G20 governments must step up efforts to resist protectionism, says OECD, WTO, UNCTAD report*. [Online]
Available at:
http://www.oecd.org/newsroom/investmentg20governmentsmuststepupeffortstoresistprotectionismsaysoecdwtounctadreport.htm
[Accessed 16 05 2014].

OECD.Stat, 2005. *Import Penetration: Database Spesific*. [Online]
Available at:
http://stats.oecd.org/oecdstat_metadata/ShowMetadata.ashx?Dataset=CSP6&Coords=%5BSUB%5D.%5BIMPPENET%5D&Lang=en
[Accessed 28 04 2014].

OECD.Stat, 2013. *Producer Support Estimate by Country: Norway 1986-2012*. [Online]
Available at: http://stats.oecd.org/Index.aspx?QueryId=50477
[Accessed 04 02 2014].

OECD.Stat, 2014. *StatExtracts: Economic outlook-OECD Annual Projections (GDP, Unemployment…). Country: Norway, Variable: Unemployment Rate*. [Online]
Available at: http://stats.oecd.org/#
[Accessed 28 04 2014].

OECD, 2009. Chapter 2: overview of the OECD Indicators of Agricultural Support. In: *The PSE Manual*. s.l.: OECD, pp. 17-25. [Online]
Available at: http://www.oecd.org/tad/agricultural-policies/41120402.pdf
[Accessed 28 04 2014].

Olson, M., 1983. The Political Economy of Comparative Growth Rates. In: Mueller, ed. *The Political Economy of Growth*. New Haven: Yale University Press.

O'Rourke, K. H., 2009. Government policies and the collapse in trade during the Great Depression. In: R. Baldwin, ed. *The Great Trade Collapse: Causes, Consequences and Prospects*. London: Centre for Economic Policy Research, pp. 31-37.

Ossa, R., 2014. *Trade Wars and Trade Talks with Data,* Chicago: NBER and the University of Chicago. 49 pages.

Papademos, L., 2009. *Financial stability and macro-prudential supervision: objectives, instruments and the role of the ECB*. [Online]
Available at: http://www.ecb.europa.eu/press/key/date/2009/html/sp090904_3.en.html
[Accessed 06 12 2013].

Peltzman, S., 1976. Toward's More General Theory of Regulation. *Journal of Law and Economics,* Volume 19, pp. 211-248.

Pincus, J. J., 1975. Pressure Groups and the Pattern of Tariffs. *Journal of Political Economy,* 83(4), pp. 775-778.

Pritchard, A. E.-., 2013. *Europe fears 'uncontrolled protectionism' as emerging markets turn against free trade*. [Online]
Available at: http://www.telegraph.co.uk/finance/economics/10282016/Europe-fears-uncontrolled-protectionism-as-emerging-markets-turn-against-free-trade.html
[Accessed 05 03 2014].

Quibria, M., 1989. Neoclassical Political Economy: An Application to Trade Policies. *Journal of Economic Surveys,* 3(2), pp. 107-136.

Rickards, J., 2011. *Currency Wars: The making of the next global crisis*.. London: Penguin Books Ltd.

Rodríguez, F. & Rodrik, D., 2000. Trade policy and economic growth: a sceptic's guide to the cross-national evidence. *NBER Macroeconomics Annual,* Issue 15, p. 261–325.

Rosé, A. K., 2012. *Protectionism Isn't Counter-Cyclic (Anymore),* s.l.: NBER Working Paper No. 18062. 41 pages.

Salvatore, D., 2011. *International Economics: Trade and Finance*. 10 ed. s.l.:John Wiley & Sons (Asia) Pte Ltd.

Schinasi, G. J., 2004. *Defining Financial Stability*, WP/04/187: International Monetary Fund. 18 pages. [Online]

Available at: https://www.imf.org/external/pubs/ft/wp/2004/wp04187.pdf
[Accessed 06 12 2013].

Schioppa, P. T., 2003. *Central banks and financial stability*. [Online]
Available at: http://www.ecb.europa.eu/press/key/date/2003/html/sp030707.en.html
[Accessed 06 12 2013].

Sherman, R., 2002. Endogenous Protection and Trade Negotiations. *International Politics*, Volume 39, p. 491–509.

Sieg, G., 1997. The Political Economy of the International Protection Cycle. *Journal of Economic Integration*, 12(3), p. 325 – 343.

SSB.no, 2013. *8. Utenrikshandel (External trade)*. [Online]
Available at: http://www.ssb.no/a/histstat/publikasjoner/
[Accessed 06 03 2013].

SSB.no, 2014. *Statistisk Årbok*. [Online]
Available at: https://www.ssb.no/befolkning/artikler-og-publikasjoner/statistisk-aarbok?start=120
[Accessed 03 05 2014].

SSB, 1965. *Norges Økonomi etter Krigen. The Norwegian Post-War Economy*, Oslo: Central Bureau of Statistics of Norway. 436 pages.

SSB, 1978. *Historical Statistics 1978: NOS XII 291*, Oslo: Central Bureau of Statistics of Norway (SSB). 650 pages.

Staiger, R. W. & Tabellini., G., 1999. Do GATT Rules Help Governments Make Domestic Commitments?. *Economics and Politics*, 11(2), pp. 109-144.

Stigler, G. J., 1971. The Theory of Economic Regulation. *Bell Journal of Economics and Management Science* , 2(1), pp. 137-146.

The Economist, 2010. *The protectionism that wasn't*. [Online]
Available at: http://www.economist.com/blogs/freeexchange/2013/09/world-trade
[Accessed 03 05 2014].

The Economist, 2012a. Culture matters more. [Print] *The Economist*, 11 August, pp. 19-20.

The Economist, 2012b. *Protectionism Alert: The world should heed warnings that barriers to trade are creeping up*. [Online]
Available at: http://www.economist.com/node/21557766
[Accessed 03 05 2014].

Thompson, 2011. *International Economics: Global Markets and Competition*. 3 ed. s.l.:World Scientific Publishing Co.Pte.Ltd.

Trefler, D., 1993. Trade Liberalization and the Theory of Endogenous Protection: An Econometric Study of the U.S. Import Policy. *Journal of Political Economy*, 101(1), pp. 138-160.

Tumlir, J., 1985. *Protectionism: Trade Policy in Democratic Societies*, Washington DC: American Enterprise Institute. 72 pages.

U.S. Department of Commerce, 2011. *Value of U.S. Imports for Consumption, Duties Collected, and Ratio of Duties to Values: 1891-2010*. [Online]
Available at: http://dataweb.usitc.gov/scripts/AVE.PDF
[Accessed 03 2013].

UNCTAD, 2013. *Classification of Non-Tariff Measures February 2012 Version,* New York and Geneva: United Nations. [Online]
Available at: http://unctad.org/en/PublicationsLibrary/ditctab20122_en.pdf
[Accessed 03 05 2013].

van den Berg, H., 1995. Tariffs and Quotas in an Endogenous Policy Model: Are Tariffs still Better than Quotas?. *Journal of Economic Integration,* 10(1), pp. 32-48.

Wiberg, M., 2005. *Endogenous Tariff Formation and The Political Economy of Retaliation, Liberalization and Trade Wars under Representative Democracy: A Probabilistic Voting Model,* SE-106 91 Stockholm: Department of Economics, Stockholm University. 38 pages.

WTO, ITC, UNCTAD, 2011. *World Tariff Profiles 2011: Applied MFN tariffs,* Geneva, Switzerland: The World Trade Organization (WTO), The International Trade Centre (ITC), United Nations Conference on Trade and Development (UNCTAD). [Online]
Available at: http://www.wto.org/english/res_e/booksp_e/tariff_profiles11_e.pdf
[Accessed 03 05 2013].

WTO, 2013. *The 128 countries that had signed GATT by 1994*. [Online]
Available at: http://www.wto.org/english/thewto_e/gattmem_e.htm
[Accessed 30 11 2013].

WTO, WT/TPR/S/269. *Norway, summary: Trade Policy Review. WT/TPR/S/269.* [Online]
Available at: http://www.wto.org/english/tratop_e/tpr_e/s269_sum_e.pdf
[Accessed 10 05 2014].

Young, L. & Magee, S. P., 1986. Endogenous Protection, Factor Returns and Resource Allocation. *Review of Economic Studies ,* Volume 53, pp. 407-419.

8. Appendices

Appendix 1: The General Agreement of Tariffs and Trade

Appendix 1 Selected articles from GATT

Article number:	Article content
Art. 1 on most favoured nations (MFN)	"Bilateral concessions must be extended to the other contracting parties."
Art. 3 on national treatments	"The products from one importing contracting party should not be directly or indirectly subject to internal taxes or charges in excess of those applied directly or indirectly to like domestic products."
Art. 6 on anti-dumping (AD) and countervailing duties	AD is introducing a good to a market at a price less than its normal value. In order to use this rule the AD must have a risk of damage in the domestic industry. AD can be justified on the grounds of public welfare and learning-by-doing from developing industries. In order to prevent AD a contracting party may levy on any dumped product an AD-duty not greater than the margin of dumping. This is called a countervailing duty.
Art. 11 on the prohibition of quotas in the favour of tariffs	"No prohibitions or restrictions other than duties, taxes or other charges, whether made effective through quotas, import or export licences or other measures, shall be instituted or maintained". This is to ensure greater visibility (as the effect of price elasticity is easier to determine than potential changes in quantity), facilitate negotiations (due to greater visibility) and ensure government income. Quotas can be justified on grounds of macroeconomic instability.
Art. 16 on export subsidies	Export subsidies are forbidden for manufactured exports, but accepted for primary products. However, the contracting parties should seek to avoid this use. If a contracting party grants directly or indirectly any form of subsidy which contributes to increasing exports this subsidy cannot be applied in a manner so that the contracting party gains more than a "equitable" share of world export trade.
Art. 19 on safeguard measures	A Party can deny access of a foreign product if it is possible to prove that the product can threaten a national product or a national industry. Quantitative proof is not necessary. The reporting party has to inform in writing the contracting party of their use of article 19 so that the Contracting Party can react. It should be limited in time and give rise to negotiations.
Relevant derogations to the GATT Agreement	The GATT articles does not cover agriculture or services. Contracting Parties are allowed to reduce tariff and quotas for developing countries and least developed countries without infringing article 01 on MFN clauses.

Source: Defraigne, J.-C., 2013. European Economic Policy. Louvain la Neuve: Louvain School of Management, LSMS 2060.

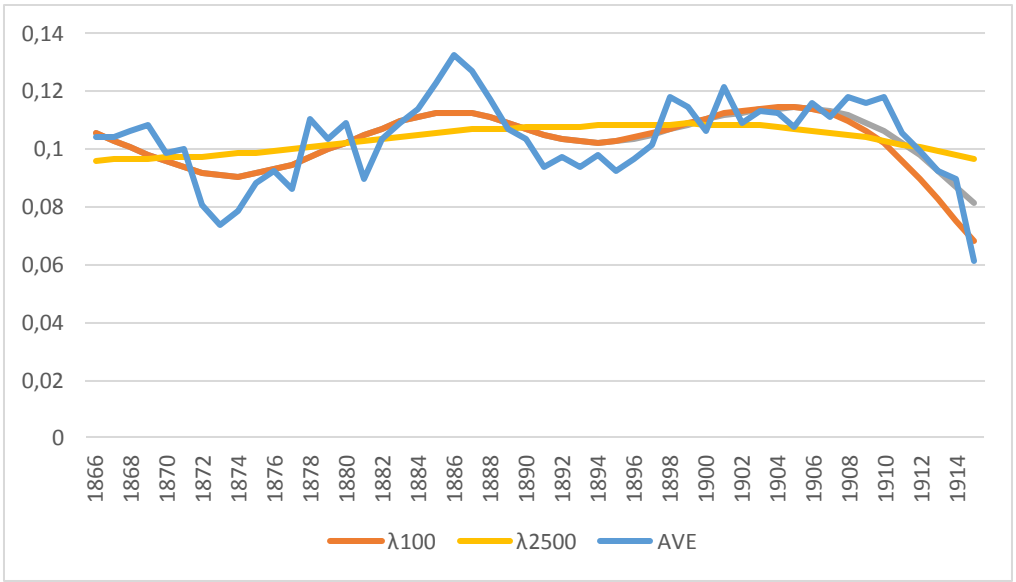
Appendix 2: Filtered and deflated AVE rate, 1866-2012

Appendix 2 Norwegian AVE (deflated) gaps as cycle deviations from HP-Filtered Trend 1866-2012

Source: SSB (1880-2013), Norwegian Statistical Yearbook from 1880-2013, in tables: "Imports and Exports." Pdf-files covering all years are available from SSB.no (2014).

Appendix 3: AVE rate and its HP-filtered trend, 1866-1915

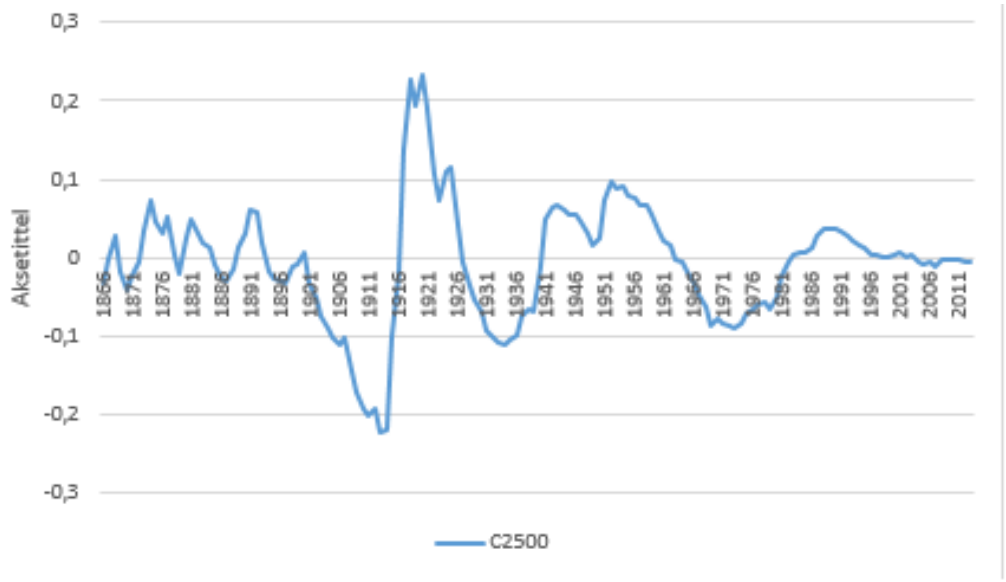
Appendix 3 Norwegian AVE rate between 1866 and 1915 and HP-Trend for λ100 and λ2500



Source: SSB (1880-1914), Norwegian Statistical Yearbook from 1880-1914, in tables: "Imports and Exports." Pdf-files covering all years are available from SSB.no (2014).

Appendix 4: Filtered CPI rate, 1866-2012

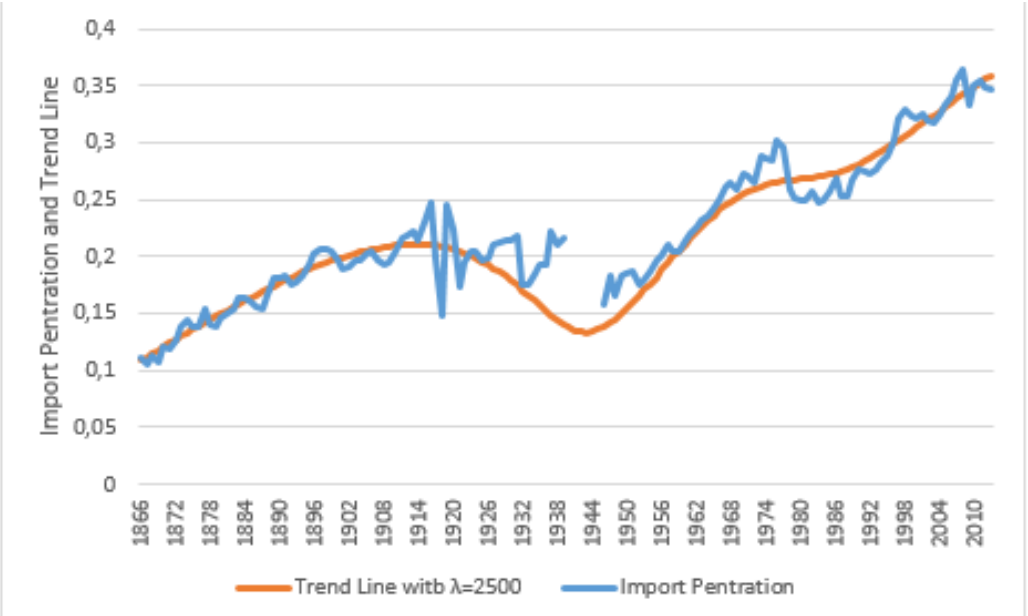
Appendix 4 CPI gaps as cycle deviations from HP-filtered trend 1866-2012



Source: Grytten (2004a)

Appendix 5: Import Penetration over time including its trend line with λ=2500

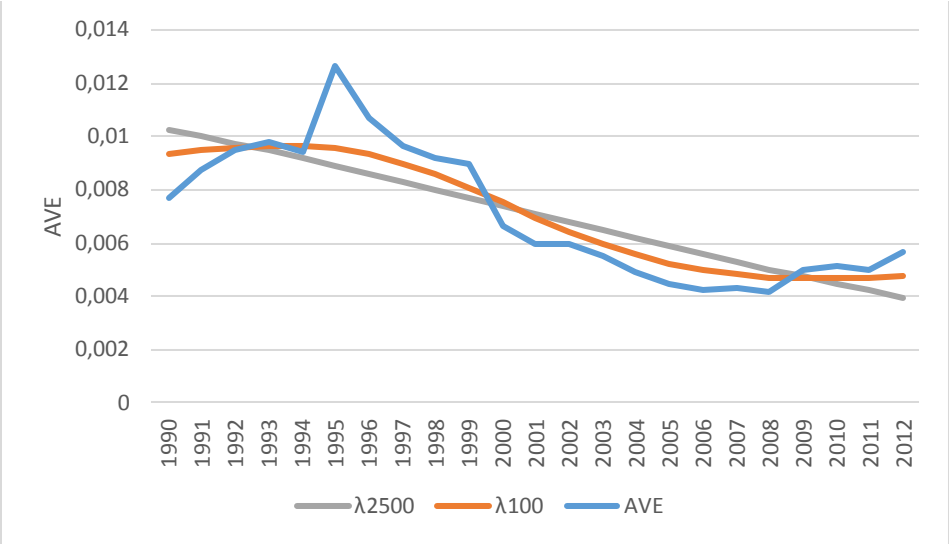
Appendix 5 Import Penetration over time in 2005-prices, including its trend line with λ=2500



Source: Import Penetration calculated with value in NOK of GDP, value in NOK of imports and value in NOK of exports, in 2005 prices, collected from Grytten (2004b)

Appendix 6: AVE rate and its HP-filtered trend, 1990-2012

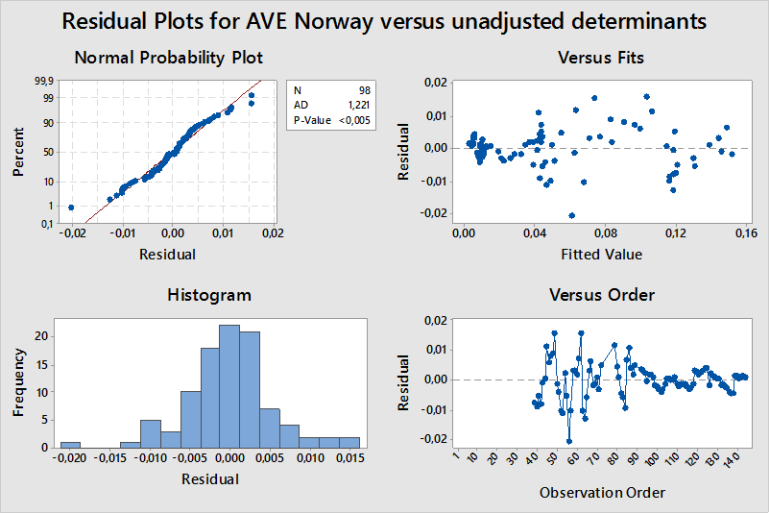
Appendix 6 AVE Rates Between 1990 and 2012 and HP-Trend for λ100 and λ2500



Source: SSB (1991-2013), Norwegian Statistical Yearbook from 1991-2013, in tables: "Imports and Exports." Pdf-files covering all years are available from SSB.no (2014).

Appendix 7: Residual Plots for various versions of the OLS model

*Appendix 7.1 Residual plots for AVE Norway versus unadjusted determinants**

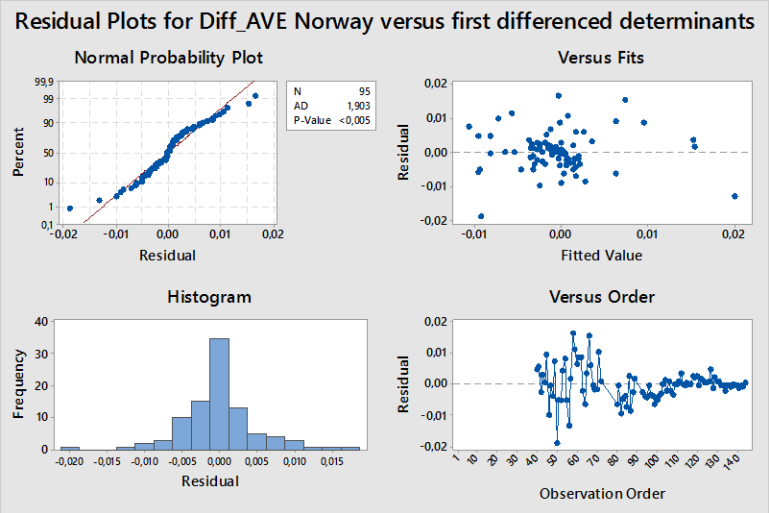


Source: see table 5, p.23 in the main text

Durbin Watson Statistics: 1.00132<DL at α=0.05 and N>100

**Model also includes a financial crisis dummy, an exchange rate dummy and a trend line*

Appendix 7.2. Residual plots for first differenced AVE Norway versus first differenced determinants

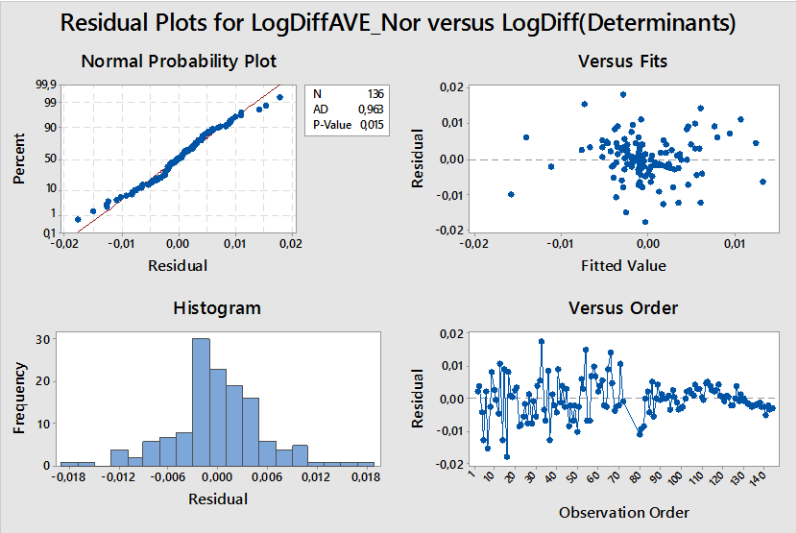


Source: see table 5, p.23 in the main text

Durbin Watson Statistics= 1.51430<DL at α=0.05 and N>100

**Model also includes a financial crisis dummy, an exchange rate dummy and a trend line*

Appendix 7.3. Residual plot for Logged and first differenced AVE Norway versus logarithmic and first differenced determinants,



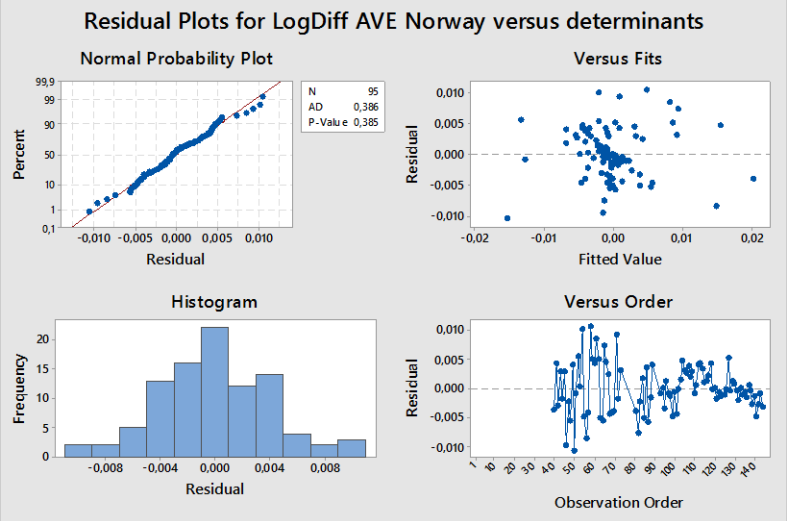
Source: see table 5, p.23 in the main text

Durbin Watson Statistics = 2.00147> D_U at α=0.05 and N>100

**Model also includes a financial crisis dummy, an exchange rate dummy and a trend line*

Appendix 8: Residual Plots for the models used in the dissertation

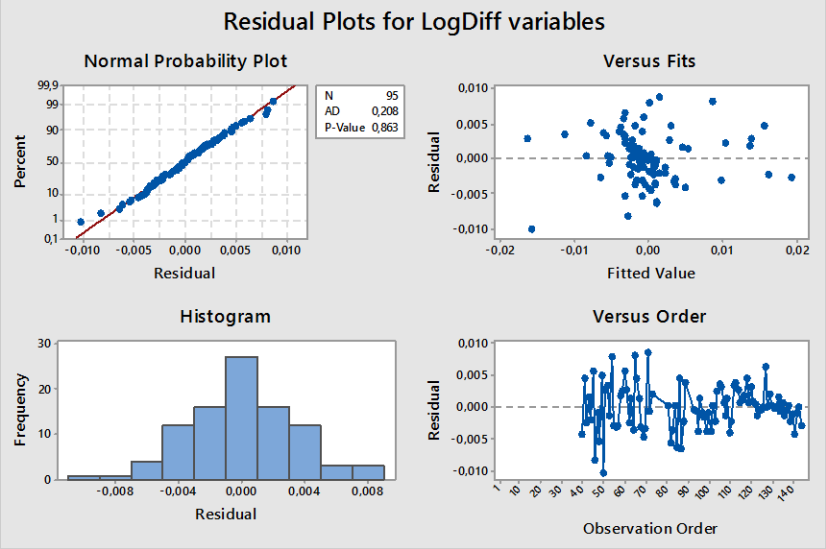
Appendix 8.1 Residual Plots for table x. on OLS results with first differenced and logarithmic values



Source: see table 5, p.23 in the main text

Durbin-Watson Statistic = 1.81519 > DU at α=0.05 and N>100

Appendix 8.2. Residual Plots for table x. on OLS results with variables as deviations from trend



Source: see table 5, p.23 in the main text

Appendix 9: Testing the significance of AVE_{t-1} on the determinants

Appendix 9 Testing the significance of AVEt-1 on the determinants in the OLS model. Dependent variable: see column 1. Independent variables: AVEt-1 and variables mentioned in column 4.

Dependent variables	**Logarithmic and first differenced dependent variable**	**Logarithmic and lagged dependent variable**	**Other variables added in the model as determinants that might affect the dependent variable:**
AVE does not cause changes in the level of import penetration	β AVE_{t-1}: 0.030 ** F: 5.04% Do not reject	-	Logarithmic, first differenced and lagged: GDPc, NOK/GBP, NOK/USD, Investment and monetary volumes
AVE does not cause changes in the level of GDPc	-	β AVE_{t-1} -0.561 **: F: 18.95% Do not reject	Export-Import, Investments, monetary volumes and interest rate
AVE does not cause changes in the level of CPI	B AVE_{t-1}: -2.890 F: 13.67% Reject	-	Monetary volumes, interest rate, exchange rate
AVE does not cause changes in the level of the unemployment rate	β AVE_{t-1} :1.80 ** F: 10.95% Do not reject	-	Interest rate, GDP, monetary levels, imports and exports
AVE does not cause changes in the level of AVE_USA	β AVE_{t-1}: 0.280 ** F: 1.17% Do not reject	-	

Source: see table 5, p.23 in the main text
Do not reject if p<0.05
**p>0.05*
***p>0.1*

Appendix 10: the OLS model (filtered) when inflation is excluded as a determinant

Appendix 10 OLS model with HP-filtered cycles at λ=2500 when excluding inflation as a variable

Independent Variables	**(1)** **Endogenous protection model**	**(2)** **Variables ×FC dummy**
Goodness of fit: Durbin Watson Anderson Darling	R2 : 91.93% R2(adj) : 91.04% 1.79136>D_U P-value : 0.593	R2 : 92.57% R2 (adj) : 91.33% 1.87697>D_U P-value : 0.973
Financial crisis dummy	0.0228 ** (0.047)	-
Filtered GDPc	0.249 * (0.061)	0.178 (0.232)
Filtered Unemployment	0.0247 (0.113)	0.0755 *** (0.002)
Filtered and lagged import penetration	-0.355 *** (0.005)	-0.410 *** (0.004)
Filtered NOK/GBP	-0.0080 (0.918)	0.023 (0.837)
Filtered and lagged AVE United States	0.2417 *** (0.000)	0.1493 ** (0.048)
Filtered and lagged AVE Norway	0.7438 *** (0.000)	0.7265 *** (0.000)
AVE trend line	0.062 (0.559)	0.189 (0.155)
Membership in GATT dummy	-	-
Filtered GDPc ×FC dummy	-	-0.125 (0.649)
Filtered unemployment×FC dummy	-	-0.0820 ** (0.018)
Filtered and lagged Import.P ×FC dummy	-	0.349 (0.264)
Filtered NOK/GDP×FC dummy	-	0.076 (0.690)
Filtered and lagged AVE USA×FC dummy	-	0.331 ** (0.024)

Source: see table 5, p.23 in the main text

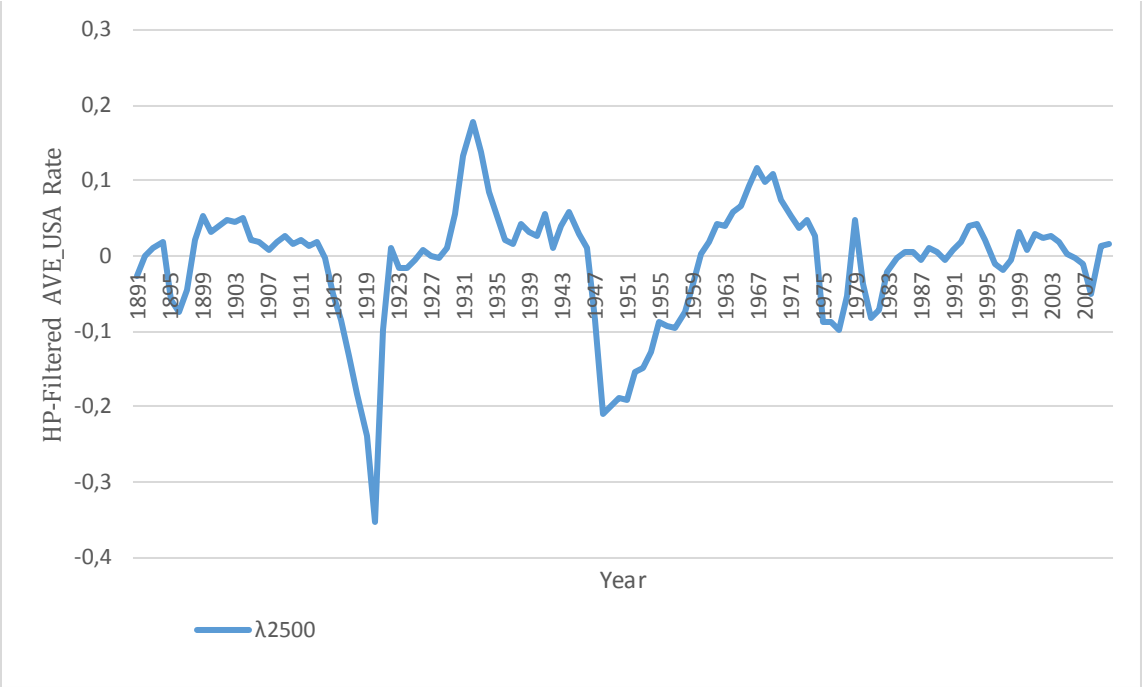
*p<0.1

**p<0.05

***p<0.01

Appendix 11 Filtered U.S. AVE Rate

Appendix 11 U.S AVE gaps as cycle deviations from HP-Filtered Trend 1891-2010 with λ=2500



Source: (U.S. Department of Commerce, 2011)

Appendix 12: The OLS model of percentage change included AVE Norway $_{t-1}$

Appendix 12 OLS model including the lagged version of the dependent variable as a determinant

Independent Variables	**(1) Endogenous protection model included logdiff AVE Norway $_{t-1}$**
Goodness of fit	R2: 63.70% R2(adj): 59.
Durbin Watson Statistics Anderson Darling Statistics	2.10692 P-value: 0.138
LogDiffLag (GDPc)	-0.0258 * (0.074)
LogDiff (Unemployment rate)	-0.00115 (0.457)
LogDiff (CPI)	-0.03501 *** (0.000)
LogDiff Import Penetration	-0.0879 *** (0.000)
LogDiffLag_3 (NOK/GBP)	0.000626 (0.114)
LogDiffLag (AVE_USA)	0.2028 *** (0.001)
Financial crisis dummy	0.00180 (0.176)

Fixed exchange rate dummy	0.0006 (0.962)
AVE trend line	0.0125 (0.254)
LogDiffLag AVE_NOR	0.0767 (0.345)

Source: see table 5, p.23 in the main text
**p<0.1*
*** p<0.05*
**** p<0.01*

Appendix 13: the OLS model (percentage change) when inflation is excluded as a determinant

Appendix 13 OLS model with logarithmic and first difference variables when excluding inflation as a variable

Independent Variables	**(1) Endogenous protection model excluding inflation**	**(2a) Variables × FC dummy excluding inflation**	**(2b) AVE USA lagged by 1 excluding inflation**
Goodness of fit	R2: 50.94% R2(adj): 46.37%	R2: 58.50% R2(adj): 52.43%	R2: 48.76% R2(adj): 41.26%
Durbin Watson Anderson Darling	1.84466>D_U P-value 0.051	2.11675>D_U p-value 0.055	2.01204>DU P-value: <0.005
Financial crisis dummy	0.00295 ** (0.039)	-	-
LogDiffLag (GDPc)	-0.0364 ** (0.013)	-0.0932 * (0.057)	-0.0342 (0.133)
LogDiff (Unemployment)	-0.00199 (0.257)	0.00071 (0.747)	0.00272 (0.261)
LogDiff (CPI)	-	-	-
LogDiff Import Penetration	-0.0577 *** (0.009)	-0.0738 *** (0.001)	-0.0416 * (0.072)
LogDiffLag_3 (NOK/GBP)	0.000862 ** (0.042)	-0.0392 * (0.057)	-0.000646 (0.312)
LogDiff (AVE_USA)	0.3562 *** (0.000)	0.5270 *** (0.000)	-
LogDiffLag (AVE_USA)	-	-	0.2882 *** (0.001)
Fixed exchange rate dummy	0.00011 (0.932)	-0.00153 (0.204)	-0.00059 (0.660)
AVE trend line	0.0276 ** (0.021)	0.0381 *** (0.002)	0.0271 ** (0.046)
LogDiffLag (GDPc) ×FC dummy		0.0105 (0.681)	0.0230 (0.423)
LogDiff (Unemployment)× FC dummy		-0.00168 (0.638)	0.00207 (0.577)
LogDiff Import Penetration×FC dummy		0.0585 (0.492)	-0.0393 (0.678)

LogDiffLag_3 (NOK/GBP) ×FC dummy		0.002276 *** (0.007)	0.002607 *** (0.005)
LogDiff (AVE_USA) ×FC dummy		-0.285 ** (0.021)	-
LogDiffLag (AVE_USA) ×FC dummy			-0.037 (0.775)

Source: see table 5, p.23 in the main text
**p<0.1*
*** p<0.05*
**** p<0.01*

Appendix 14: Testing different versions of the OLS model of percentage change

Appendix 14.1 Testing OLS model with lagged versions of the (logdiff) AVE USA rate and the import penetration variable. The columns show which variables are adjusted differently than in row 1

Independent Variables* ***all variables with logarithmic value and first differenced***	**(i) AVE USA lagged by 1 is added to the model**	**(i) AVE USA is lagged by 1 added, excluding non-lagged version**	**(i) Import penetration lagged by 1 is added to the model**
Goodness of fit	R2: 63. 06% R(adj): 58.17%	R2: 60.08% R(adj): 55.33%	R2: 62.56% R(adj): 57.59%
Durbin Watson Anderson Darling	1.89345>D_U P-value: 0.472	1.95953 P-value: 0.092	1.84616 P-value: 0.434
Financial crisis dummy	0.00163	0.00168	0.00184
GDPc lagged by 1	-0.0356 ***	-0.0351 **	-0.0372 **
Unemployment	-0.00146	0.00044	-0.00207
CPI	-0.03741 ***	-0.04381 ***	-0.03923 ***
Import Penetration	-0.0887 ***	-0.0836 ***	-0.0934 ***
Import penetration lagged by 1	-		-0.0082
NOK/GBP lagged by 3	0.000589 *	0.000492	0.000641
AVE_USA	0.1754 **	-	0.2086 **
AVE USA lagged by 1	0.0657	0.1374 **	-
Fixed exchange rate dummy	0.00013	-0.00020	-0.00022
GATT dummy	-0.00109	-0.0013	-0.00130
AVE trend line	0.0073	0.0034	0.0051

Source: see table 5, p.23 in the main text
**p<0.1*
*** p<0.05*
**** p<0.01*

Appendix 14.2. OLS model with NOK/GBP X Floating exchange rate as a variable

Independent Variables	(1) Endogenous protection model	(1) Endogenous protection model without inflation
F statistics	R2: 64.83% R2(adj) 61.11%	R2: 54.77% R2(adj): 50.56%
Durbin Watson Anderson Darling	1.97790 p-value: 0.345	1.96328 P-value: 0.068
Financial crisis dummy	0.00121 (0.144)	0.00261 * (0.058)
LogDiffLag_1 (GDPc)	-0.0375 *** (0.003)	-0.0362 ** (0.010)
LogDiff (Unemployment)	-0.00093 (0.541)	-0.00094 (0.585)
LogDiff (CPI)	-0.03534 *** (0.000)	-
LogDiff (Import Penetration)	-0.0899 *** (0.000)	-0.0597 *** (0.005)
LogDiffLag_3 (NOK/GBP) ×floating rate	0.001761 *** (0.002)	0.002129 *** (0.001)
LogDiff(AVE_USA)	0.1916 *** (0.001)	0.3178 *** (0.000)
Fixed exchange rate dummy	0.00051 (0.653)	0.00031 (0.808)
AVE trend line	0.0070 (0.513)	0.0216 * (0.063)
Membership in GATT dummy	-	-

Source: see table 5, p.23 in the main text

**p<0.1*
*** p<0.05*
**** p<0.01*

Appendix 15: Testing Explanatory Power of GATT on the Norwegian AVE rate

Appendix 15.1 OLS model divided into pre-GATT and post-GATT scenarios. Dependent variable: Cycle deviations from HP-filtered trend with λ2500

Independent Variables* **all variables are HP-filtered cycles*	(1) Pre-GATT (1866-1950)	(1) Post-GATT (1950-2012)	(2) Pre-GATT (1866-1950) X FC	(2) Post-GATT (1950-2012) X FC
F statistics	R2 : 96.17% R2(adj) : 94.79%	R2: 90.70% R2(adj): 88.99%	R2: 96.81% R2(adj): 94.58%	R2: 91.51% R2(adj): 88.74%
Durbin Watson Anderson Darling	1.71825 p-value : 0.811	2.24083 P-value: 0.393	1.98518 P-value: 0.423	2.52161 P-value: 0.564
Financial crisis dummy	0.0030 (0.901)	-0.0064 (0.958)	-	-
GDPc	0.302 * (0.077)	-1.007 * (0.083)	0.195 (0.398)	-0.724 (0.260)
Unemployment	0.0066 (0.763)	-0.0130 (0.784)	0.237 (0.661)	0.0068 (0.892)
CPI	0.104 (0.425)	0.551 *** (0.004)	0.157 (0.403)	0.446 ** (0.030)
Import Penetration_lag	-0.514 *** (0.002)	0.250 (0.268)	-0.506 ** (0.013)	0.026 (0.913)

NOK/GBP	-0.221 (0.185)	-0.081 (0.478)	0.190 (0.695)	-0.031 (0.820)
AVE_USA_lag	0.548 *** (0.001)	0.1704 * (0.086)	0.506 ** (0.041)	0.109 (0.338)
Fixed exchange rate dummy	-0.0086 (0.658)	-0.0006 (0.958)	-0.0056 (0.778)	0.0164 (0.234)
AVE_NOR_lag	0.598 *** (0.000)	0.7768 *** (0.000)	0.637 *** (0.000)	0.7894 *** (0.000)
GDPc_lag ×FC dummy	-	-	-0.242 (0.603)	2.51 (0.509)
Unemployment ×FC dummy	-	-	-0.0455 (0.415)	0.166 (0.481)
CPI ×FC dummy	-	-	0.143 (0.806)	0.435 (0.656)
Import Penetration_lag ×FC dummy	-	-	0.316 (0.407)	1.483 * (0.070)
NOK/GBP ×FC dummy	-	-	-0.672 (0.384)	0.453 (0.589)
AVE_USA_lag ×FC dummy	-	-	0.192 (0.727)	0.795 (0.106)

Source: see table 5, p.23 in the main text
**p<0.1*
*** p<0.05*
**** p<0.01*

Appendix 15.2. OLS model divided into pre-GATT and post-GATT scenarios. Dependent variable: logarithmic and first differenced AVE Norway

Independent Variables* ****All variables are logged and first differenced***	**(1) Pre-GATT (1866-1950)**	**(1) Post-GATT (1950-2012)**	**(2) Pre-GATT (1866-1950) * FC**	**(2) Post-GATT (1950-2012) * FC**
Goodness of fit Durbin Watson Anderson Darling	R2 : 74.20% R2(adj):65.18% 2.26885 P-value : 0.847	R2: 24.03% R2(adj): 10.08% 2.05884 P-value: <0.005	R2: 81.53% R2(adj): 69.77% 2.71628 P-value: 0.739	R2: 28.69% R2(adj): 6% 2.07884 P-value:<0.05
Financial crisis dummy	0.00252 (0.462)	0.001145 (0.127)	-	-
GDPc_lag	-0.0494 ** (0.018)	0.0140 (0.447)	-0.0792 ** (0.024)	0.0125 (0.570)
Unemployment	-0.00029 (0.927)	-0.00084 (0.499)	0.00080 (0.846)	-0.00086 (0.534)
CPI	-0.0378 *** (0.007)	-0.00536 (0.561)	-0.0415 *** (0.007)	-0.00467 (0.615)
Import Penetration	-0.0932 *** (0.007)	-0.0363 (0.275)	-0.1152 *** (0.002)	-0.0421 (0.341)
NOK/GBP_3 lag *floating rate	0.00176 (0.117)	-0.000163 (0.845)	-0.00101 (0.541)	-0.000040 (0.968)
AVE_USA	0.1499 (0.138)	0.0844 (0.323)	0.385 ** (0.026)	0.110 (0.279)
Fixed exchange rate dummy	-0.00122 (0.689)	-0.000156 (0.845)	-0.00414 (0.133)	-0.000191 (0.828)
Ave trend line	0.0506 (0.238)	-0.0411 ** (0.045)	0.0337 (0.400)	-0.0515 ** (0.017)
GDPc_lag	-	-	0.0589	-0.0098

×FC dummy			(0.154)	(0.839)
Unemployment ×FC dummy	-	-	-0.01062 (0.121)	-0.00074 (0.872)
CPI ×FC dummy	-	-	-0.0404 (0.263)	0.0260 (0.412)
ImportPenetration ×FC dummy	-	-	-0.120 (0.521)	0.0388 (0.596)
NOK/GBP_3 ×FC dummy	-	-	0.001158 (0.210)	-0.00179 (0.386)
AVE_USA×FC dummy	-	-	-0.293 (0.174)	0.118 (0.681)

Source: see table 5, p.23 in the main text
$p<0.1$
*** $p<0.05$*
**** $p<0.01$*

Appendix 16: Expanding the OLS model with more determinants

Appendix 16.1 The OLS model with variables as cycle deviations from HP-filtered trend including new determinants

Independent Variables ***all variables are gaps as cycle deviations from HP-filtered trend**	**(iii)** **Endogenous protection model**
Goodness of fit: Durbin Watson Anderson Darling	R2 : 86.92% R2(adj): 84.54% 1.84088>D_U P-value : 0.038
Financial crisis dummy	0.0066
GDPc	0.423*
Unemployment	0.0257
CPI	0.069
Import penetration lagged by 1	-0.367*
NOK/GBP	-0.130
Fixed exchange rate dummy	0.0034
AVE United States lagged by 1	0.424 ***
AVE Norway lagged by 1	0.6184 ***
AVE trend line	0.096
Average Wage	-0.598
M2	-0.0036
M0 excl. treasuries	0.0296
Gross Investments	-0.043

Source: See table 5, page 23 in the main text. For Gross Investments see Grytten (2004b), for M2 and M0 see Klovland (2004), for the interest rate see Klovland (2007) and for wages see Grytten (2007)

*p<0.1
** p<0.05
*** p<0.01

Appendix 16.2. The OLS model with variables as percentage change including new determinants

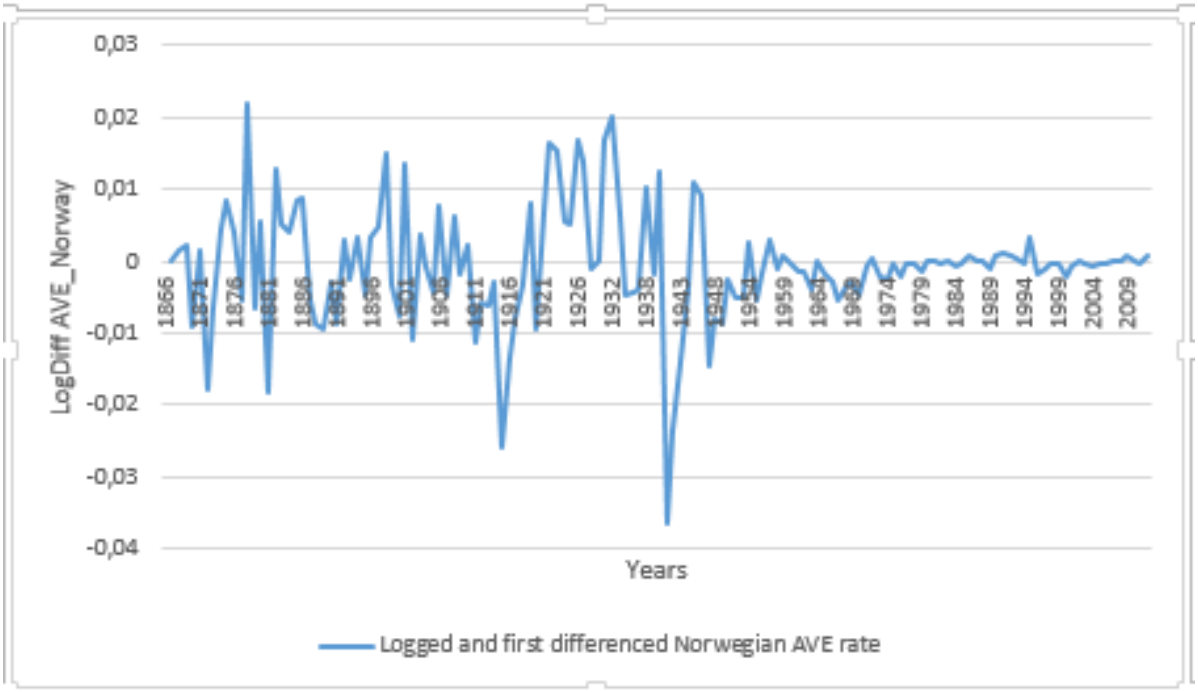
Independent Variables * **all variables are first differenced and transformed to its logarithmic value*	**(iii) Endogenous protection model + additional variables**	**(iii) Endogenous protection model + Additional variables lagged at t-1**
Goodness of fit: Durbin Watson Anderson Darling	R2 : 64.26% R2(adj) : 56.64% 1.87900 P-value : 0.289	R2: 64.77% R2(adj): 57.35% 1.93321 P-value. 0.710
Financial crisis dummy	0.00263 *	0.00180
GDPc_lagged	-0.0420 ****	-0.0415 ***
Unemployment	-0.00148	-0.00217
CPI	-0.03903 ***	-0.04119 ***
Import Penetration	-0.0749 *	-0.0959 ***
NOK/GBP_lagged by 3	0.000568	0.00064
AVE_USA	0.2128 ***	0.2102 ***
AVE_USA_lagged	-	-
Fixed exchange rate dummy	-0.00037	-0.00035
AVE trend line	0.0066	-0.0029
GATT Dummy	-0.00040	-0.00081
Average Wage	0.000	0.000
M2	-0.000	0.000
M0 excl. treasuries	0.000	0.000
Gross Investments	0.000	0.000
Interest Rate	0.000483	-0.000005
Forcing Appreciation	-0.00136	-0.00025

Source: See table 5, page 23 in the main text. For Gross Investments see Grytten (2004b), for M2 and M0 see Klovland (2004), for the interest rate see Klovland (2007) and for wages see Grytten (2007)

*p<0.1
** p<0.05
*** p<0.01

Appendix 17: Log and first differenced Norwegian AVE rate

Appendix 17 First differenced and logarithmic value of the Norwegian AVE rate



Source: SSB (1880-2013), Norwegian Statistical Yearbook from 1880-2013, in tables: "Imports and Exports." Pdf-files covering all years are available from SSB.no (2014).

Appendix 18: Direct imports as a percentage of total production by main group of industries

Appendix 18 Direct Imports as a percentage of total production by main group of industries (1955 prices)

År *Year*	Konsumvare-næringer *Industries producing consumers' goods*	Investerings-varenæringer *Industries producing capital goods*	Eksportvare-næringer *Export-oriented industries*	Skipsfart *Shipping*	Andre tje-nesteytende næringer *Other service industries*	Alle næringer *All industries*
1949	13,1	19,5	10,9	37,3	5,8	12,4
1950	14,0	19,3	11,4	35,9	5,7	12,7
1951	13,1	19,2	12,2	33,3	5,6	12,6
1952	12,9	20,5	11,6	33,7	5,6	12,4
1953	13,5	19,9	11,3	33,4	5,8	12,5
1954	13,4	22,9	12,6	35,0	6,1	13,2
1955	13,6	23,0	14,0	34,3	5,5	13,4
1956	13,6	22,1	12,8	34,0	5,3	13,2
1957	12,9	22,5	13,8	33,2	5,4	13,2
1958	13,1	21,8	14,2	32,7	5,5	13,3
1959	13,7	22,2	16,4	33,1	5,6	14,0
1960	13,7	23,7	17,2	32,2	5,7	14,4
1961	13,9	24,2	17,5	31,4	5,3	14,2

Kilde: Manuskript i Statistisk Sentralbyrå. *Source: Manuscript in the Central Bureau of Statistics of Norway.*

Source: (SSB, 1965, p. 202)

9. Glossary

Ad valorem duty: "A custom tariff duty expressed as a percentage of the value of the imported goods, e.g. 10 per cent of the value. In the case of specific duties (i.e. US$ 2.00/kg.), the ad valorem equivalent can be calculated, which gives the equivalent level of the duty in percentage terms at a given time, that is, the year of imports used in the calculation (WTO, ITC, UNCTAD, 2011, p. 185)."

Ad valorem equivalent: "An ad valorem equivalent is the equivalent in percentage terms of a specific, mixed, compound or other duty containing a specific element. Ad valorem equivalents are calculated for customs duties that are not ad valorem. The AVE is calculated from the actual duty collection or from an historical unit value of imports. For example, the AVE of a specific duty of US$ 1/kg levied on a product with a unit value of US$ 10/kg is equal to 10 per cent (US$ 1/US$ 10) (WTO, ITC, UNCTAD, 2011, p. 185)."

Contracting Party: is used for countries that have signed the GATT agreement (GATT Contracting Parties) and for countries that have signed the EEA agreement (EEA contracting parties).

Custom Duty: "A customs duty is a tax levied at the border on imported goods (…). Other sources sometimes use the term "tariff" to refer to a duty (WTO, ITC, UNCTAD, 2011, p. 185)."

GATT: "The General Agreement on Tariffs and Trade has been superseded as an international organization by the WTO. An updated General Agreement is now the WTO agreement governing trade in goods. GATT 1947 is the official legal term for the old (pre 1994) version of the GATT. GATT 1994 is the official legal term for the new version of the General Agreement, incorporated into the WTO, and including GATT 1947 (WTO, ITC, UNCTAD, 2011, p. 185)."

Hard Law: rules and regulations that are binding upon the contract party

Tariff: "A duty (or tax) levied upon goods transported from one customs area to another either for protective or revenue purposes (WTO, ITC, UNCTAD, 2011, p. 187) "

Uruguay Round

Soft Law: rules and regulations that are not binding upon the contract party