Cover picture: Dutch galiot. D. de Bajt. 1824. Sjöhistoriska museet.
On the Ocean of Protectionism
The Structure of Swedish Tariffs and Trade
1780–1830
Abstract

In the field of international trade there is an intriguing tension between the ideological allure of free trade and the political reality of protectionism. Typically, the former is favored by scholars while the latter has been more historically prevalent. Protectionism in the form of tariffs and other obstacles trade was generally a preferred trade policy around the globe in the 18th and early 19th centuries. Sweden was no exception and has been seen as highly protectionist and mercantilist during this period.

This thesis has sought to shed new light on Swedish trade policy between 1780 and 1830. It has done so by quantifying and homogenizing tariffs and import bans in order to be able to analyze the structure of tariffs. The thesis stands on a theoretical ground which takes into account the different plausible reasons for setting tariffs. It has placed some emphasis on the possible tension between the desire to shelter one’s own industry from foreign competition and the need to use tariffs for fiscal purposes, as an important source of government revenue. It is therefore argued that tariffs need to be separated theoretically and empirically. A simple model is presented which aims to discern three types of tariffs. The model takes into account the tariff rate itself, and also the structure of trade and the presence of domestic substitution.

The thesis has found that Swedish tariffs were generally high over the period and that protectionism was prevalent in a large number of economic sectors. There is tentative evidence that protectionist tariffs also distorted trade in certain types of goods, even if they didn’t have an impact on total import levels. Tariffs were also set so as to separate between raw materials and more processed goods, what is called mercantilist differentiation. Substantial empirical support is given to the claim that certain tariffs on inelastic consumption goods were of great fiscal importance, and increasingly so as the period progressed. The fiscal pressure maintained or even increased the import tariffs, which made it possible to decrease tariffs on exports.

*Keywords:* foreign trade, international trade, tariffs, trade policy, fiscal policy, protectionism, mercantilism, taxes, Sweden, Napoleonic Wars

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Henric Häggqvist
In the literature on international trade and trade policy, an intriguing tension between theory and practice seems to be almost inherent. While most scholars come to the conclusion that free trade is the most reasonable and effective handling of foreign trade both economically and politically, protectionism in its different varieties has still been a favored policy around the globe through the ages. Harry Johnson has perhaps put it most clearly when he argued: “[t]he proposition that freedom of trade is on the whole economically more beneficial than protection is one of the most fundamental propositions economic theory has to offer for the guidance of economic policy.”1 Frank Taussig had earlier pointed to the divide between political reality and economic theory when he claimed that “the doctrine of free trade, however widely rejected in the world of politics, holds its own in the sphere of the intellect.”2 This academic debate has persisted and has led to the surfacing of more literature on why protectionism has been favored by governments in spite of the doctrines of free trade that have prevailed in economic theory. Paul Bairoch took the division a step further when he claimed that rather than the other way around, “historically, free trade is the exception and protectionism is the rule.”3

Protectionism can be broadly defined as the presence of tariffs and other obstacles to trade, while free trade denotes the absence of such obstacles. A state uses trade policy tools such as tariffs to hinder the free flow of goods, and when this is done to such an extent that it shelters the domestic market from foreign competition it is called protectionism. Other trade policy tools besides tariffs can be bans on imports and exports, quantitative restrictions such as quotas, exchange controls, dumping, etc. Closely related to this are policy tools concerning naval transportation, such as shipping fees and possible restrictions (bans, quotas) on foreign shipping in domestic ports.

Connected to the discussion outlined above, one can ask: if free trade is so theoretically sound, then why has the use of tariffs and other trade obstacles been so historically prevalent? What purposes have the use of tariffs as a tool for trade policy served? One key rationale behind the use of tariffs is a

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belief that sheltering domestic producers will further industrial development and economic growth. “The tariff-growth debate” has received some noteworthy attention within economics and economic history. Several scholars have investigated whether protectionist tariffs were positively or negatively associated with economic growth during the decades of intense industrialization in the Western hemisphere between 1870 and 1914. So far there has been no definite answer to this question; Paul Bairoch and Kevin O’Rourke⁴, independently of one another, did find some positive correlation between protectionism and economic growth, while this has been questioned by Douglas Irwin and Antonio Tena-Junguito, to mention but a few of the participants in this debate.⁵ The other side of the protectionism-breeds-growth-argument in contrast means that the absence of trade distortion will allow a freer flow of goods between nations, which will lead to an expansion of trade that will foster economic growth.

Trade policy during pre-industrial periods has received less scholarly attention and has, perhaps naturally, been less connected to issues of economic growth and industrial development. The use of tariffs during the 18th and early 19th centuries has instead usually been analyzed in connection to the overall mercantilist regulation of the economy and as a way of keeping import levels down and so maintaining a positive trade-balance. Protectionism has also been connected to the development of certain manufacturing sectors, such as Eli Heckscher and Sven Gerentz did with textile production in 18th and early 19th century Sweden.⁶

The period around the turn of the 18th century was a transformative time, one which would lead to economic and political change around Europe, both in the long and short term. Particularly the Napoleonic Wars changed the structure of international trade and would come to have a great impact on the direction of trade policy and the organization of trade interests, which would both (seemingly contradictorily) tear down mercantilist trade regulations and strengthen protectionism.⁷ In Sweden, 1809 was a year which saw both the loss of Finland after war with Russia and the adoption of a new constitution which would change the division of political and economic power after four decades of completely authoritarian rule. Much like the Napoleonic Wars

affected trade around Europe, so did it have great impact on Swedish trade as well, even though Sweden tried to remain neutral and shelter itself from the possible effects of the war and its accompanying trade blockades.8

Paul Bairoch eloquently described early 19th century trade policy around Europe as being “an ocean of protectionism surrounding a few liberal islands”. These “islands” carried out some, for the period, groundbreaking liberalizations of trade policy during the late 18th and early 19th centuries. Denmark decreased tariff rates and removed many import bans already in 1797, and the Netherlands did so in 1816, hence somewhat preceding Great Britain’s historic move towards free trade during the 1840s when the Corn Laws were removed and tariffs generally were cut.

Swedish historiography usually has it that tariffs were protectionist within an overall mercantilist trade policy from the beginning of the 1700s well into the middle of the 19th century.9 Eli Heckscher has described policies as being generally restrictive and static before 1815 and mercantilism as maintaining its stronghold over economic policies until the 1860s. Lars Magnusson has, on the other hand, called Heckscher’s statement “highly dubious” and has stated that a “Smithian system” was accepted by leading Swedish economists during the first half of the 19th century. Adam Smith and similar thinkers “were interpreted as proponents of an ‘industrial system’ which indeed allowed for more freedom of trade and industry than before but at the same time was compatible with state intervention.”10

This should have meant a fairly constant degree of the restrictiveness of trade policy where the structure of tariffs remained mostly unchanged over a long period of time. One can further ponder whether this constant protectionism went hand in hand with a stagnant Swedish economy, present from the early 18th century until the second half of the 20th century.11

1.1 Purpose of the Thesis

This dissertation wishes to focus on both the development of foreign trade and of trade policy in Sweden between roughly 1780 and 1830. The historical trajectory of Swedish foreign trade has been described and analyzed first and foremost by Eli Heckscher and Staffan Högberg. In An Economic History of

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Sweden. Heckscher presented the development of foreign trade on the aggregate level, while putting some focus on the issue of smuggling and on who were Sweden’s major trading-partners.\textsuperscript{12} Högberg’s presentation has the advantage of treating some of the major exports and imports of the time in detail, but its use is limited by the fact that the analysis ends in 1809 and it excludes certain important commodities, such as long-distance consumption goods, for example coffee, tea, sugar and tobacco.\textsuperscript{13} Both scholars based their evidence on primary material from the National Board of Trade, \textit{Kommerskollegium}, albeit in different ways as will be further shown in chapter four. Series on imports and exports between 1780 and 1830 hence already exist, but they have been shown by Ernst Söderlund and Rolf Vallerö respectively to be problematic for several reasons. As a result, new figures for exports and imports were created in the two historical national accounts presented by Lennart Schön and Olle Krantz, and Rodney Edvinsson. These figures are from 1800 and are on the aggregated level, thus no new re-calculation of trade data exists on the commodity level or on the aggregated level before 1800. This dissertation hopes to fill this methodological and empirical gap.

When trade policy was dealt with by Heckscher, he generally discussed major trends, for instance when it came to changes in tariffs. There is some description of differences between tariffs across commodities, but on an aggregated level. Arthur Montgomery was more detailed in describing and analyzing changes made in Swedish tariffs after 1815, but even here there is no coherent treatment of the tariff levels across a large range of commodities. One of the latest contributions to the historiography of Swedish trade policy, by Patrick Jonsson, mostly describes the number of trade bans in place, but deals little with tariffs. What all these presentations lack is a quantitative operationalization of tariffs, allowing for a fruitful way of comparing tariffs across a variety of different commodities as well as over time. This dissertation will look at the same primary material on tariffs as Heckscher and Montgomery did (to be described further in chapter five), but will measure tariffs in a consistent way so as to be able to operationalize them quantitatively. This has not been done with Swedish tariffs for this period before. The dissertation will be a chronological bridge between those descriptions of Swedish trade policy that end before 1815 (Heckscher, Högberg) and those that have taken 1815 as their starting point (Montgomery, Jonsson).

One purpose of the thesis is hence methodological, to present new series on Swedish foreign trade and tariffs. This is instrumental for the main purpose of the thesis, which is to gauge, describe and analyze Swedish trade policy during the period from a structural perspective. Trade policy is here operationalized as the structure of tariffs; the difference in tariff rates across commodity groups and individual commodities. Which commodities or type

\textsuperscript{12} Heckscher (1949), pp. 649–661.

of commodities were highly taxed and which were taxed at lower rates? What plausible reasons could there be for distinguishing between different commodities, and what does this tell us about pre-industrial Swedish trade policy? Analyzing the structure of tariffs allows for quite detailed data on the commodity level, while at the same time enabling us to make judgements on trade policy at the aggregated level. The structure of Swedish tariffs before 1830 has not been analyzed in this way before, but the dissertation will share some similarities in idea and presentation with Jan Bohlin’s article on the structure of Swedish tariffs between 1885 and 1914. While taxes and fees on shipping are a closely aligned political and economic issue, regulations such as the Navigation Act will not be dealt with unless they affected tariff rates (more of which in chapter five).

The dissertation aims furthermore to highlight and analyze some of the impact that tariffs might have had, here mostly on the volume of trade, but also regarding whether there was any fiscal impact in practice.

The analysis will center on the period between 1780 and 1830 – a half-century which saw drastic economic and political change around Europe, starting with the French Revolution leading onto the Napoleonic War, which significantly impacted international trade and trade policy. One can raise the question whether this also meant a transformation of Swedish economic policies such as those regulating foreign trade, which have so far been described mainly as static during this period. It would be virtually implausible to think of Sweden as an isolated island that was left completely unaffected by the major events which characterized Europe around the turn of the 18th century. Something would have had to give.

1.2 Perspectives on Pre-industrial Swedish Trade Policy

Eli Heckscher considered that Swedish tariffs during the pre-industrial era had “minor” significance as objects of study since they were static and basically the same everywhere in Europe during this time. He argued that the numerous import bans and prohibitions mattered more for trade policy, even though he also wrote that tariffs were the most important of all trade and shipping taxes. Heckscher further argued that the trade policies of the time did not have any direct effect on the actual development of trade, and that they should be seen only as an expression of policymakers’ desires. He however also opined that the general restrictiveness of Swedish trade policy probably had a negative impact on the growth of the country’s foreign trade. Even though he

15 Heckscher (1949), p. 663.
16 Ibid, p. 662. Heckscher later extended this claim about trade policy to the era of industrialization during the late 19th and early 20th centuries.
mostly blamed the quantitative restrictions put on the production and export of iron through the brukslagar, the regulation of iron production, Heckscher also meant that the export industry probably bore much of the costs of protection for the import-competing sector. Sven Gerentz in turn claimed that it was not until after 1815 that trade policy started to have a “bigger importance” for Swedish economic history.

If we focus on the period in question for this dissertation, Swedish trade policy around the turn of the 18th century is usually described as very restrictive – with import and export bans being numerous, with high import tariffs in place, and the use of export tariffs and strict regulations of shipping. Protectionism affected many economic sectors – manufacture and domestic handicraft first and foremost, but also mining, agriculture and shipping. Arthur Montgomery saw Swedish trade policy as going through a brief period with more liberal tendencies during the Napoleonic Wars (1803–1815), but then reverting directly back to protectionism in 1816. Sven Gerentz rather considered the period after 1815 as being more of the same protectionist policies that had sheltered domestic manufactures since the 1720s and 1730s. Patrick Jonsson has shown that certain liberalization occurred after the end of the Napoleonic Wars and in the following two decades, as the number of import bans went down from 285 in 1816 to 115 in 1824, and then further down to 36 in 1835. Montgomery stated that the cut in the number of import bans in 1824 was of greater numerical importance than the qualitative difference they made, as most bans that affected domestic producers within the iron and textile industries were retained. Montgomery further argued that the changes that were suggested were meant mainly to deal with budgetary concerns, a lack of tax revenue, and a will to deter smuggling – liberals concerns were hence of minor importance even though they had won some symbolic victory. Jonsson however argued that this move can be seen as “the first offense from the Diet towards the restrictive policy” and that the principal decision to remove the import bans was a key liberal initiative.

On the more sectorial level, Klas Rönnbäck has written that domestic sugar-refineries, as an infant industry, benefitted heavily from protectionism, as

21 Jonsson’s calculations refer to the number of items in the toll lists designated as being banned from trade. More than one article/commodity may have been included under one prohibition entry, meaning that the total amount of prohibited goods likely was higher. Jonsson (2005), p. 8.
refined sugar was taxed with high tariffs and had a very low degree of import penetration. He continues:

The policy was most successful: during virtually all of the 18th century, and the first half of the 19th century, only un- or semirefined sorts of sugar were imported. This protection certainly did foster a growing domestic manufacture, as can be seen from the steady growth of sugar imports, but many of the refineries did experience hardships when the protectionist policy was finally revoked in 1848.24

Heckscher was generally very critical of the protection of domestic manufactures and particularly singled out the textile sector, which benefitted not only from numerous import bans and high tariffs on foreign clothing and finer fabrics, but also from export bounties. He pointed to the low productivity within domestic wool and clothing production towards the end of the 18th century, given how much they were encouraged by the state. Heckscher further meant that the low foreign demand for Swedish textiles, resulting in low export figures, was caused by high prices and the low quality of the goods.25 Sven Gerentz came to similar conclusions about Swedish textile manufacturing and meant that the state’s protection and encouragement of this sector “was wasted”.26

Staffan Högberg has in turn explained the use of tariffs on exports, particularly on iron, with their importance as a source of revenue for the state during the 18th century. As such, he claimed, there was a certain clash in policy between encouraging exports in metallurgy and forestry and at the same time setting tariffs on these exports for budgetary reasons.27

1.3 A Theoretical Introduction to Tariffs

A tariff is essentially a tax that the state levies on the export and import commodities it trades in, or does not want to trade in. The tariff, or trade tax, is related either to for example measurements of weight, length, quantity, and is then a specific tariff. It can also be related to a value, measured as the actual price or estimated price of a commodity, and is then called an ad valorem tariff. This value-related measurement is often preferred when policy is the main object of study because exact levels can be given as the tariff is expressed as a percentage of the value or price of the commodity. This allows, among other things, for smoother comparisons over time, and between different goods and between different nations’ tariffs, than the other measurement would. Here,

“tariffs” will be used to denote this type of trade tax throughout this text. Occasionally “duty” will be used to mean the same thing.

Tariff rates denote the level of protection or openness that a country wishes to have regarding its exports and imports. As an indirect tax, tariffs, like consumption taxes, also raise revenue on every item imported and exported unless it has a rate of zero, i.e. duty-free trade. This is termed “customs revenue”, which will be explained further in section 1.3.5. As any tax tariffs are hence both regulatory and revenue-raising, this sets some of the parameters for how they can be analyzed.

Contemporary theory and policy on tariffs focus almost solely on imports since exports are usually not taxed, but for the world of the 18th and 19th centuries export tariffs were still very much a reality and will hence also be included here. Other possible trade restrictions are export and import quotas, exchange controls, export and import licenses, etc. which like tariffs also affect the levels of trade, but do not directly increase the price of the commodity. Before World War I duties on imports (and to a lesser extent, exports) were the main trade restriction used by countries around the globe. Nowadays tariffs, although still in existence, are less of an object of interest and conflict in trade policy, since several multilateral agreements after World War II, mainly through the World Trade Organization (WTO), have put binding caps on tariff levels. In 1994 the bound tariffs through the General Agreement on Tariffs and Trade (GATT) on industrial products capped 99 per cent of imports in the developed economies, while corresponding numbers in transition economies and developing economies were 96 and 59 per cent, respectively.

1.3.1 Protectionism and Free Trade

To begin with, we must attempt to define what separates free trade from protectionism. Typically free trade is defined as the absence of restrictions to buy and sell products between countries, where no price is added to the cost of production and transportation due to tariffs, quotas or similar policy interventions. Douglas Irwin has defined free trade in political terms as:

[A] policy of the nation-state toward international commerce in which trade barriers are absent, implying no restrictions on the import of goods from other countries or restraints on the export of domestic goods to other markets.

Protectionism on the other hand usually aims to impede the imports to a country by trade restrictions in the form of tariffs, bans, quotas, quantitative

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restrictions, etc. This is usually done “in favor of those [goods] produced within the country, usually with the aim of sheltering domestic producers from foreign competition.” Tariffs by their nature raise the price of an imported or exported commodity above its original world price or production cost. A direct effect is hence that the imported commodity becomes relatively more expensive in the domestic market and the exported good has a price added to its production value. That is where the protectionist effect lays, taxing goods to make them expensive enough to deter trade. That is also what research focusing on welfare loss due to tariffs examines: if the price is increased enough it entails a welfare loss, for instance through decreased domestic consumption. This is especially true for economically small nations which do not have the market power to affect international prices and have to take them as given.

The classic case for free trade, based mainly on the writings of David Ricardo, is that it would entail efficient and specialized production in each country, “to exchange what one produced efficiently for what others produced efficiently, and thus to wind up with more rather than less”, as Bhagwati put it. Free trade allows for a way to secure a good by either efficient domestic production (through specialization) or through efficient (low cost) trade. Protectionism, on the other hand, is not concerned with attaining goods at the lowest possible price. Pervasive protectionism is not about specialization, but rather about furthering domestic production in preference to foreign on a large scale.

Another variety of protectionism is “retaliation protection”, which Adam Smith spoke of as a theoretical possibility to get the other country (in a simple two-country model) to open up its market when it has been closed to one’s export of manufactures. Increasing one’s own duties or imposing prohibitions towards the other’s manufactures could then be a way to force down trade barriers. These types of trade wars were recurring during the 18th century as a result of recurring military hostilities between the major powers of Europe, mainly England, France and the Netherlands. In every war during the century, tariffs were increased against “the other” in a retaliatory manner. Another way to put it is that one’s own use of tariffs may be a way to counter the trade distortion effects created by imposed tariffs and (export) subsidies on the part of other countries.

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31 Ibid.
1.3.2 Varieties of Protectionism – Infant Industry

A common version of protectionism is the “infant industry argument”, which had two of their biggest proponents in the late 18th and early 19th centuries: Alexander Hamilton and Friedrich List. Jacob Viner has, however, argued that the infant industry argument has an even older history. Alexander Hamilton was the first Secretary of the Treasury from 1789 to 1795 in the newly independent United States, and argued for protectionism to assist the aspiring economy of the new nation. Hamilton’s publication *Report on the Subject of Manufactures* from 1791 became influential in materializing American infant industry protectionism a quarter of a century later. Friedrich List came to be partly influenced by Hamilton, and his publication on political economy from 1841 similarly speaks of the possibility to increase one’s manufacturing power and domestic merchant fleet through protective duties and restrictions on navigation. List argued staunchly against those who proposed a British system of free trade, since he believed that Britain had been the most pertinent applier of infant industry protectionism and that this had been responsible for the country’s economic success. He argued further that German textile firms needed protection in order to be able to compete with the British. The central feature of the infant industry argument is that domestic industry and producers of goods should be protected behind trade barriers in the form of high import tariffs or import quotas, until they are strong enough to compete on world markets. Foreign commodities from the same sector as the one that the state wants to protect from competition usually get high import tariffs, while the same domestic commodities can receive low or zero export tariffs in return. What distinguishes the infant industry argument from the “ordinary” protection of domestic industries is that the measure should be temporary, employed during a limited, but not necessarily set, period of time. The idea is that the industry in question after a while should be able to compete without the aid of protective duties, after it has acquired either more efficiency through improved production schemes or through increased workers’ skills, what is typically called a learning-by-doing effect. The clearest description of the argument was perhaps put forward by John Stuart Mill in the middle of the 19th century:

> The only case in which, on mere principle of political economy, protecting duties can be defensible, is when they are imposed temporarily (especially in a young and rising nation) in hopes of naturalizing a foreign industry, in itself perfectly suitable to the circumstances of the country … A protective duty, continued for a reasonable time, will sometimes be the least inconvenient mode in which the nation can tax itself for the support of such as an experiment. But

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the protection should be confined to cases in which there is good ground of assurance that the industry which it fosters will after a time be able to dispense with it; nor should the domestic producers ever be allowed to expect that it will be continued to them beyond the time necessary for a fair trial of what they are capable of accomplishing.40

It has however been pointed out in later research that infant industry protection “can easily become permanent” in the face of a government’s lack of commitment or possibility to liberalize trade policy or domestic firms’ strategic choice to become internationally competitive and hence desire extended protection.41 One can add that rather than making a strategic choice, domestic producers may not reach competitiveness due to inefficiencies or slow learning-by-doing.

In economic theory, infant industry has been called a “noneconomic argument for protection”, where “protection is not the optimal policy, except in the case where the noneconomic objective calls for the achievement of a certain degree of self-sufficiency (or volume of imports).”42 Harry Johnson has similarly argued that the policy yielding the best result when assisting rising industries would not be tariff protection, but rather a direct subsidy to the industry. This would be partly because a protective tariff on imports would result in a decrease in consumption. If the political goal is instead to decrease the volume of imports, then the tariff is deemed to be the most optimal tool.43 Historically however, infant industry protectionism has been considered to possess some merit for its possibility to foster domestic industry and production. Frank Taussig found that high levels of tariffs were mainly used to protect “young industry”, such as cotton, wool, and iron, in the early days of the independent American republic. The protection was deemed by Taussig to sometimes have been of an “extreme” character, so much so that the first steps in some industries would not have been taken if it had not been for the economic stimulus given them through the tariffs.44 Paul David has pointed out that infant industry protection, particularly of textiles, was prevalent in many countries. He also showed that there were some learning-by-doing effects on manufacturing efficiency in the American cotton textile industry before the Civil War, particularly between 1834 and 1860.45

has extended this claim to encompass most of the developed economies of the 20th century. Chang argues that infant industry policies, mostly but not exclusively in the form of tariff protection, were employed by many nations in the West leading up to or during the Industrial Revolution. These policies, in this view, led to economic growth and technological progress and were even “key to the development of most nations.”46 Jeffrey Williamson, on the other hand, has maintained that the infant industry argument is historically more or less irrelevant until the turn of the 19th century when a couple of Latin American countries began to “use … protection specifically and consciously to foster industry.”47

1.3.3 Distortionary Tariffs and Degree of Protectionism

The literature often stresses that tariffs need to be fairly high in order to be distortionary to trade flows and to have a protectionist effect. There are, however, no universally established boundaries in the academic field on what constitutes heavy or light protection, but one can arrive at approximate estimations which can be helpful. What is certainly true is that tariffs need to be of some significant (although not exactly established) level for protection of domestic industries to be plausible, or at least for such protection to be effective in any sense of the word. In the late 17th and early 18th centuries England had a duty of about 5 per cent on exports and imports, a level which has been regarded as “non-distortionary” (i.e. not having enough effect on actual trade levels and flows).48 Hence, a tariff rate of 5 per cent on a good is probably not a protectionist measure in the sense that it aims to effectively keep out foreign products from the country in order to further domestic production of that product. On the other side of the spectrum, we have the view that ad valorem tariffs of over 50 per cent “by any standard represent heavy protection.”49 So, a tax on foreign trade of 5 per cent is not enough distort the flow of trade, while one over 50 per cent is an essential policy intervention.

Research that focuses on the effective protection of different industries makes use of the measurement “effective rate of protection” (ERP), which is also focused on what level tariffs are set. Effective protection is not exactly the same as nominal protection, which means the level of the tariff rates on protected goods. ERP shines some light on the effect of tariffs, particularly whether they actually create some added value to the industry that the government wants to shelter from competition. It is defined as “the amount

by which a nominal tariff raises an industry’s value added above its free trade level.”\textsuperscript{50} In one of the early works on effective protection Max Corden defined it as:

The percentage increase in value added per unit in an economic activity which is made possible by the tariff structure relative to the absence of tariffs but with the same exchange rate. It depends not only on the tariff on the commodity produced but also on the input coefficients and the tariffs on the inputs.\textsuperscript{51}

Hence, tariff rates need to be of a high enough level in order for protection to be effective. Bowen et al. use the example of domestic rice production to show that a 10 percent (ad valorem) import tariff on rice and a 20 percent import tariff on fertilizer (as an input) together are “unlikely” to increase the value added to that sector.\textsuperscript{52} The concept of ERP also distinguishes between tariff rates depending on the level of refinement of the commodity, where the lowest duties are set on inputs and raw materials and then increase with the degree of refinement or manufacturing. Higher tariffs on inputs decrease the rate of effective protection by increasing the costs of the inputs to the concerned industry. One needs to be cautious with which input affects which industry or production though. As Corden has exemplified, a tariff (compared to no tariff) on raw cotton may decrease the rate of effective protection for spinning, but does not have the same impact on weaving.\textsuperscript{53}

Regardless of the level of tariffs, it is sometimes argued that the distortionary effect on trade can be avoided to a certain extent. Forrest Capie has, however, argued that there is no doubt in the connection between increasing tariffs and decreasing levels of trade:

[T]here is no escaping the fact that trade is impaired. As we have noted, the accompanying fall in some countries has sometimes been steep. There follow declines in shipping and services and so on.\textsuperscript{54}

Since it is often difficult to distinguish between what motivations drive trade policy, looking at just the rates of protection on individual commodities is not necessarily enough. What is important here is instead to discern how a country taxes domestic and foreign goods. It is argued that: “if this difference is small, a country can be characterized as maintaining a liberal trade policy, even if tariffs are imposed.”\textsuperscript{55} Similarly, Douglas Irwin has called this a “limited, nineteenth-century, definition” of free trade where the key feature

\textsuperscript{50} Bowen, Hollander and Viana (2012), p. 45. Italics in original.
\textsuperscript{52} Bowen, Hollander and Viana (2012), p. 47.
\textsuperscript{53} Corden (1966), p. 223.
\textsuperscript{55} Hoekman and Kostecki (2001), p. 22.
is whether or not foreign commodities are discriminated against on behalf of domestic ones. He writes that: “free trade does not necessarily mean that tariffs are zero if equivalent direct taxes on domestic production ensure that no preference is given to domestic over foreign goods.”\(^{56}\) That would for instance entail domestic consumption taxes, such as the excise duty, being of an equal or similar level as import tariffs on the same goods or goods of substitution.

1.3.4 Mercantilism and Protectionism

As noted in the introduction, Swedish trade policy during the 18th and most of the 19th century has been described both by the words “protectionism” and “mercantilism”; it seems as if there is no clear delineation between the two. Even if clear-cut labels are not of major interest for this dissertation, it might still be in order to clear up a few things regarding these two ways of looking at trade policy before moving on any further.

Mercantilism in its original meaning and in reference to trade policy specifically has a basic foundation: exports should be supported, while imports should be restricted so that the country in question has a positive balance of trade (meaning an export surplus). A classic quote from 17th century English writer Thomas Mun (1571–1641) states that:

The ordinary means therefore to increase our wealth and treasure is by foreign trade, wherein we must ever observe this rule; to sell more to strangers yearly than we consume of theirs in value.\(^{57}\)

Lars Magnusson has pointed out that mercantilism should not be seen as a unitary economic doctrine, but rather as a series of discussions that shared a common vocabulary serving varying purposes. It should further not be seen as the natural opposite of economic liberalism; several English 18th century mercantilist writers were critical towards protectionist measures, while at the same time not singing the praises of a completely free trade – the key was what degree of regulation of trade that should be employed.\(^{58}\) Swedish 18th century mercantilists differed partly from their English brethren in their heavy focus on manufactures as the source of economic growth and industrial development, which made them more similar to mercantilists on the European continent. A big part of this was also a concern about the risk of a deficit in the trade balance, meaning an import surplus.\(^{59}\)

Douglas Irwin has pointed out points of contact between infant industry protection and the “mercantilist consensus that governments should use tariff


\(^{59}\) Ibid, pp. 249–261.
policy to protect manufacturing and discourage raw material exports.” He does not, on the other hand, want to equate mercantilists with protectionists, since “the mercantilist eulogy of international trade clearly makes it a mistake to interpret them as being crude protectionists whose program was akin to autarky.” Mercantilists were usually critical of restrictions and regulations that stood in the way of the growth of exports and merchants’ activities in that field.60

Irwin also discusses whether protectionism can be called mercantilism in his study of trade policy during the Great Depression of the 1930s. He recognizes that the trade restrictions of the time could be called mercantilist rather than protectionist since the policy had the aim of improving the balance of trade and decreasing the outflow of gold reserves. Where the two “isms” can be separated, partly, is in their respective aim and scope:

Of course, protectionism is not incompatible with mercantilism, and there is no inherent conflict between the two. The goals and underlying motivation, however, are different. Protectionism is selective and favors certain industries with government assistance. Mercantilism implies much more pervasive restrictions on trade in order to reduce overall spending on imports.61

Jacob Viner has made a similar distinction and means that the two are separated from one another more in their respective emphasis than in their practical content. Protectionists desire to place restrictions on “imports of foreign goods of a kind which can be produced at home in order that domestic production and employment may be fostered” while not worrying about the overall level of imports.62

Open critics towards protectionism and mercantilism have not shied away from normatively portraying the ideologies in the same way:

The connection between mercantilism and infant industry protection is very strong – both have strong nationalistic connotations, and both rest on very weak economic foundations.63

So, mercantilism may be described as an overarching economic policy that concerns among other things trade, trade-balance, and manufacture policy. This may encompass protectionism, which as seen above can be described as a trade policy that is more limited in reach and span. Protectionism can hence exist without mercantilism as its “superstructure”, even though the two are often mentioned in the same breath.

60 Irwin (1996), p. 44.
1.3.5 Tariffs as a Source of Revenue

Governments are always seeking ways to secure incomes to the public treasury, and using taxes on foreign trade has historically been one of the easier ways of collecting revenue. Swedish chancellor Axel Oxenstierna (1583–1654) once exclaimed that indirect taxation, such as tariffs and excise, was “pleasing to God, hurtful to no man, and not provocative of rebellion.”64 Perhaps this line of thought has been the reason why taxes on trade, and consumption, have persevered: “taxation of trade for revenue purposes has been a hardy perennial throughout recorded history…revenue considerations prevail almost universally.”65

The importance of tariffs for government revenue is partly shown in the historiography of how liberalizations of trade policy came about in the US and Britain. US tariff rates were running high throughout the 19th century and made up about 50 percent of government income between 1870 and 1914. When tariff rates were reduced significantly in 1914, this occurred after taxes on income had been introduced in 1913, suggesting that tariffs could only be decreased when replaced with another reliable source of revenue.66 Monica Prasad writes on the reshaping of the American tax system that “the [progressive] income tax was seen as the quickest route to shifting the burden of taxation from tariffs paid by consumers to those with high incomes.”67 A similar trajectory is visible in Britain’s liberalization of its tariffs in the 1840s, which came about after a proposal for an income tax had been introduced to partly end the dependency on tariffs for revenue. Certain tariff rates could then be cut, without jeopardizing efforts to deal with Britain’s “chronic debt problem.”68 On the other hand it was also true that Britain retained high tariffs on certain goods during its free trade period and taxed exotic consumption goods for revenue purposes.

One important rationale behind the “fiscal need argument” for tariff-setting is that revenue is collected despite whether a high or a low tariff is set, as long as the taxed commodity is exported or imported at all. A high tariff rate may not even necessarily denote a wish to protect domestic industries from foreign competition, “but simply that it is the cheapest way to finance the

More than high or low rates in general, it may be more important which commodities are taxed higher or lower comparatively speaking. This was the argument vigorously put forth by Adam Smith regarding indirect taxation. Smith claimed that there was a danger in levying high taxes on the importation of such “life necessities” as salt, candles, leather and linen since a high price, a consequence of import taxes, on those goods could “provoke riots and revolution as well as widespread hardship.” Smith saw no such risk when setting higher tariffs on “luxuries”, such as alcoholic beverages, tobacco, sugar and tea. Therefore “‘colonial goods’ were ‘fiscal goods’, appropriate targets for taxation.” The basis for Smith’s argument was historical evidence, which showed that France and Britain had different experiences during the 18th century when it came to food riots. While protests and revolts were commonplace in ancien regime France, large-scale revolts were virtually non-existing in Britain. Britain comparably levied lower tariffs on such “necessities of the poor” as soap, candles and leather, while taxing the import of wine and leather higher.

Another aspect of the fiscal need argument is that the possibility to raise revenue successfully may be hurt if tariffs on certain goods are raised too drastically. If the import or export duty impedes the flow of goods to a significant extent, then the end result may be a smaller income for the government, even if the tariff rate per item is higher than before. This conundrum raises the issue of whether a country can set “optimal” or “revenue-maximizing” tariffs. Calculations can specify that for an economically small country, defined as not being able to affect the import price of a good by its own trade alone, the taxing of “luxuries” is optimal for revenue purposes if the duty as a proportion of the price of a certain commodity, an ad valorem tariff, is equal to the absolute value of the price elasticity of demand.

1.3.6. Fiscal Tariffs or Protectionist Tariffs?

Fiscal considerations can operate alongside or in contradiction to protectionist motives for tariff-setting and trade policy. Historical examples show how it has not been entirely clear why tariffs have been levied the way they were. Even though Alexander Hamilton during his time as Secretary of the Treasury during the early American Republic has been interpreted as a proponent of infant industry protection, he also set tariffs for revenue purposes. American import tariffs were increased in several steps during the 1790s to pay for current expenses running at about three million dollars per year and to service

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70 Ibid, p. 3
a foreign and domestic debt that was as high as 75 million dollars.\textsuperscript{73} One
important distinction between whether a tariff may be protectionist or purely
revenue-raising is spelled out in the argument that in order for a tax to be
protectionist it has to favor the same, or similar, domestic commodities for
which it sets high import tariffs. The logic is that “if there were no competing
domestic industry, then however high the tax on a foreign product sold at
home, there would be no protection.”\textsuperscript{74}

This was the basis for an influential debate between John Vincent Nye and
Douglas Irwin on the nature of British and French tariff policies in the 19\textsuperscript{th}
century. This debate will serve to explain the importance of whether commod-
ities have domestic equivalents or substitutes or not. Nye argued that the es-
tablished picture that Great Britain was a champion of free trade, while France
sat behind a protectionist wall of tariffs, was in large parts exaggerated. He
wanted to show that average French tariffs were lower than the respective
British ones until the end of the 1880s, while France at the same time had
a high and steady rate of duty-free commodities throughout the century. In
Nye’s view, the difference between high tariffs for revenue, on articles of con-
sumption, and high tariffs for protection, on manufactures, was “artificial”
and differentiating between them was not fruitful. He saw the British reve-
 nue tariffs on spirits, sugar, tea, tobacco and wine, which were maintained
throughout the country’s alleged free-trade period, as being used to “protect
both domestic and colonial industry.”\textsuperscript{75} The rationale underlying Nye’s argu-
ment centered on the issue of wine-tariffs. Even though Britain had no own
wine industry to protect, the high import tariffs on French wine, especially
compared to Portuguese port wine, did in effect shelter British producers of
beer and ale. Nye argued that:

It is troublesome to read protectionism as limited to tariffs on those items also
produced in the home country. The problem with this narrow reading is the
basic economic fact that there are substitutes for virtually everything. Raise
the tariff on wine and people will drink beer; the tariffs on coffee affect the
patterns of tea consumption.\textsuperscript{76}

Irwin argued in his reply that there indeed was an important difference
between revenue tariffs and protectionist tariffs and that the import taxes
on commodities such as spirits, wine, tobacco, and tea – which accounted
for 95 percent of Britain’s customs revenue in 1880 – could not be seen as
protectionist duties. He wrote that these tariffs were not sheltering producers
in import-competing sectors from foreign competition, but rather that they

\textsuperscript{73} Northrup, C. C. and Prange Turney, E. C. (Eds.) (2003). Tariffs and Trade in U.S. History:
An Encyclopedia. Greenwood, pp. 4–16
\textsuperscript{74} Dormois, Foreman-Peck and Lains (2006), p. 3.
\textsuperscript{75} Nye, J. V. (1991). The Myth of Free-Trade Britain and Fortress France: Tariffs and Trade in
the Nineteenth Century. The Journal of Economic History 51, 23–46.
\textsuperscript{76} Ibid, p. 35.
were “carefully imposed for revenue purposes” and were viewed as such by British contemporaries.\textsuperscript{77} Since Britain retained zero percent import tariffs on manufactured goods at the end of the nineteenth century, it did not set out to protect domestic producers in those sectors. France by contrast did tax the import of manufactures substantially and could not, contrary to Britain, be labelled as free-trade, according to Irwin. He further stated that since British import tariffs on French wine equaled domestic excise taxes on beer, French wine was not discriminated against and there was hence no protectionist effect to speak of. Tariffs on foreign wine and spirits were “carefully constructed to avoid protecting domestic producers.”\textsuperscript{78} This debate on domestic substitutions and the definition of free trade was never completely settled, but I will come back to it in chapter five and six when it has importance for how tariffs can be classified.

One should add that the discussion about domestic substitutions of foreign imports does not exclusively apply to alcoholic beverages and typically “fiscal goods”. Kenneth Pomeranz has briefly discussed whether the British dependency on foreign cotton during the 18\textsuperscript{th} century could have been replaced by hemp and flax. He however quickly came to the conclusion that they were considered inferior to cotton, partly because they were more difficult to work with and mechanical spinning was developed later for them than for cotton. The biggest reason hemp and flax cannot be considered as equals to cotton is that they were extremely labor-intensive and manure-intensive crops: so much so that most people only grew them as garden crops. Even three centuries of government schemes and subsidies had failed to promote larger-scale production in either England or North America.\textsuperscript{79}

Antonio Tena-Junguito later made some important additions to the Nye/Irwin debate outlined above. He stated that in theory there is no such thing as purely fiscal tariffs or purely protective tariffs, but that their effect could be different and distinguishable:

However those which have a small elasticity of demand (fiscal tariff) have much lower impact on welfare and import substitution than those with high elasticity. The strong presence of the so-called fiscal products and their changing presence throughout trade history makes this point important in the analysis of the comparative evolution of the international trade policies specially in Europe.\textsuperscript{80}


\textsuperscript{78} Ibid, p. 146.


Tena-Junguito argued further that there is good reason to separate fiscal tariffs from the average tariff in order to give a better index of the rate of protection. He also showed that for certain European countries over the 19th century the average tariff became quite different (lower) when fiscal goods were excluded. Irwin had however shown earlier that this was not similarly applicable to American tariffs over the same period, which rather showed that additional revenue could be extracted from slightly higher tariffs on protected products, rather than from many of the typical fiscal goods (except for sugar) which were mainly produced domestically. This means that there was not the same difference in the average American tariff with or without the typical “fiscal” products (sugar, coffee, tea, tobacco, spirits, and wine) as in Europe. Contrary to common belief, Irwin also showed that higher tariffs induced an increase in customs revenue, rather than the other way around (see above).⁸¹

### 1.3.7 Import Substitution and Export Promotion

There are other interpretations of how tariffs are set which might be relevant to discuss briefly. I will here focus on the issues of import substitution and export promotion.

Import substitution refers to a set of policies that set out to replace dependency on foreign goods with what can be produced domestically. It includes high tariffs to deter the import of certain commodities, but does not entail complete import elimination and autarky. Alexander Hamilton, for instance, argued in his *Report on Manufactures* that the US should become completely self-reliant when it came specifically to manufactured goods – i.e. not import such products at all. Other policy instruments included in import substitution are for instance the discouragement of foreign direct investment and encouraging domestic saving and investment. Import substitution was widely used by developing economies in the global south during the 1950s and 1960s, mostly in Latin America, to discourage mainly manufacturing imports from northern (richer) economies in order to promote and build their own industries.⁸² In practice protection encompassed a large number of goods, for instance a range of consumables. It hence shares characteristics with infant industry protectionism, but usually refers to a wider set of policy instruments for industrial development.

Kenneth Pomeranz has pointed out that, compared to the 20th century, import substitution in the early modern era (roughly before 1800) was quite a natural occurrence. Only a few types of production (Pomeranz mentions silk-

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rearing and weaving) had such complexity that it became difficult to compete with already established international leaders. The exceptions to this “natural process” of import substitution only took place when

[s]ome special raw material was missing, where particularly complex skills were involved, or where government or lordly monopolies interfered.83

Import substitution can thus be historically understood not first and foremost as a set of conscious policies to foster domestic industries and self-reliance, but as almost inherently present in pre-industrial economies.

Export promotion is defined here as a possible result of import protection, where a stable home market allows for some large scale production and possibilities to sell large quantities over time. In a segmented oligopolistic market of scale, it becomes possible to sell products at high prices in domestic markets while at the same time “flooding” foreign markets with the same goods, but at a lower price. Paul Krugman has explained that protection of the home market might promote exports in this way since “by giving a domestic firm a privileged position in some one market, a country gives it an advantage in scale over foreign rivals.”84 Export promotion may hence be a desired effect of the protection of domestic markets rather than a different interpretation of it.

1.3.8 A Simple Model of How to Interpret Tariffs

This section draws together the discussion set out in the previous pages and presents a basic way of how to interpret the setting of Swedish tariffs and how commodities can be categorized based on their political treatment. A couple of caveats first: even though categorizations will be used, it is also understood that these are fluent and not completely given. As shown by the Nye/Irwin debate, goods can be classified into different categories depending on the nature of the domestic economy: to what extent do substitutes for foreign import exist for instance? From that debate and from the later contribution by Tena-Junguito, it seems helpful to make a distinction between protectionist tariffs and fiscal tariffs. Even if Nye would argue that this distinction is artificial, it at least seems like a plausible option for policy analysis. A third category is raw materials, which can either be inputs into domestic production and manufacturing, based on the literature on effective protection, but also consists of primary commodities ready for consumption. Examples of inputs are unfinished textiles and tobacco leaves meant for further processing in domestic industries/manufactures. Primary commodities are for instance consumption goods such as fruit, fish, meats, dairy, and grains.85 We hence wind up with three

85 Grains can, however, be ”inputs” in the sense that they are required for baking bread and distilling brandy (from barley for instance).
main categories of commodities/tariffs based on the theoretical implications previously described. The question is how to categorize them in the best way? There are basically three factors which play a role. First, the level of trade in a particular commodity: if any good is imported in large quantities, it will matter little for protectionist concerns if it has a prohibitive level of tariff set. Equally, a good that is not imported at all, or virtually non-traded, will have zero fiscal effect in practice regardless of the tariff rate applied. Two, the level of the tariff: as shown in much of the literature, tariffs usually need to be of some moderate to high level in order to be distortionary to trade and hence result in a protectionist effect. Equally, but reversely, a tariff that is low may create very little customs revenue unless the import of the good is very high in quantity. Such goods may instead be interpreted as raw materials rather than fiscal goods. Third, even though levels of both trade and tariffs matter, they need not necessarily be enough by themselves to categorize commodities/tariffs. There also needs to be some assessment of what role the commodity plays for the country’s trade; what is it used for? Here factors such as domestic production and possible domestic substitution come into play. These types of assessments may be made from a quantitative standpoint by looking at the levels and structure of trade, but some qualitative judgment of the use of the commodity also needs to be taken into consideration.

Based on the possible distinction between protectionist and fiscal tariffs as shown in the Nye/Irwin debate and the importance of analyzing tariffs on inputs and primary commodities, here labelled raw materials, table 1.1 summarizes how these categorizations/classifications could be analyzed. The intent is that the ideas of the model will be present in the background when tariffs are presented and analyzed in chapter five. The three categories will then be referred to again when tariffs are tested against trade in chapter six, based on the results found in chapter five.

Table 1.1 A Simple Model of Tariff-classification

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<th>Trade level</th>
<th>Tariff rate</th>
<th>Domestic substitution</th>
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<tr>
<td>Protectionist</td>
<td>Zero to low</td>
<td>Medium to high</td>
<td>Medium to high</td>
</tr>
<tr>
<td>Fiscal</td>
<td>Medium to high</td>
<td>Medium to high</td>
<td>Zero to medium</td>
</tr>
<tr>
<td>Raw materials</td>
<td>Medium to high</td>
<td>Zero to low</td>
<td>Zero to low</td>
</tr>
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the higher the degree of restrictiveness. What is commonly termed “moderate protection” is usually found somewhere in the span of 15–20 percent to 35–40 percent ad valorem. Naturally, these levels are relative to one another and not absolute in any sense. The same goes for trade levels, where commodities are presented relative to one another, as a share of total trade volumes, as will be done in chapter four. The level of domestic substitution can be discussed, as was done by Nye and Irwin, and chapter six will show that it is not entirely given whether a tariff should be classified as “protectionist” or “fiscal”, depending on how one operationalizes domestic substitution or equivalents of foreign goods.

This model, simple as it is, is not a catch-all, explain-all model. Certain goods and tariffs may fall between the cracks and may not be possible to classify at all according to this schema, as will also be shown in chapter six. It is furthermore not very useful in explaining changes over time, but it may be used to show changes over time, as trade, tariffs, and the domestic economy and production change. The idea is anyway that the model will demonstrate the need to look at both trade and tariffs, as well the domestic economy, when the structure of tariffs is investigated.

1.4 Research Questions and Scope

This dissertation will focus on the setting of Swedish tariffs in the late pre-industrial era, more precisely between 1780 and 1830. This is a half-century which predated the initiation of the Swedish industrial take-off and boom in economic growth.86 Some first stumbling steps were taken towards liberalizations of trade policy, which perhaps were most notable in the reduction and eventual complete dismantling of the Swedish Navigation Act of 1724. Even though more noticeable decreases of import tariffs would not come until the 1850s, certain changes to the structure of tariffs occurred during the period in question here.87

Tariffs will be assessed from 1783, which was the first time that tariffs for foreign trade by sea (there were tariffs for trade across the land borders with Norway and Russia as well) were combined with other smaller fees into a larger collected customs duty for exports and imports. These smaller fees were for instance the licent and extra licent, which were collected mainly to pay for shipping and other freight-related costs. This means that 1783 is the first year that we can truly start to assess a collected Swedish tax for foreign trade in a way that is coherent and comparable over time. From 1783 it is also

87 Montgomery (1921b); (Jonsson 2005).
possible to analyze protection over a number of economic sectors. 1830 is chosen as the final year since that year marks a revision of import tariffs, when a large number of import bans were removed. According to Montgomery this change was more quantitative than it was qualitatively important, which means that for this dissertation the impact would be more methodological than analytical. The removed import bans were all replaced with tariffs, meaning that from 1830 there is a much greater number of tariffs to be assessed – in fact too many to take into account in the time frame of this project. The close to 50 years that this dissertation spans is still enough to be able to assess possible differences over time as well as to conduct time series analyses. It allows for the possibility to investigate whether the Napoleonic Wars, which ended in 1815, had any impact on Swedish foreign trade and trade policy as the literature on international conditions during the time has suggested.

The analyses done here will not deal with the tariff growth issue – whether protectionism retarded or promoted economic growth – which has received greater historical attention over the last couple of decades, particularly concerning the decades of industrialization prior to World War I. Suffice to say that the debate regarding whether protectionism was positively associated with economic growth in Western economies during the late 19th and early 20th centuries is divided. The data presented in this dissertation will, however, make it possible to assess questions of tariffs and growth in pre-industrial Sweden. One important take-away from the tariff growth debate is the need to distinguish between different types of tariffs (for instance between protectionist and fiscal tariffs) rather than just measure the average tariff of all imports. Both Irwin and Tena-Junguito pointed out in their replies on this issue that earlier results may have been spurious since an average tariff does not capture the different effects on trade and the economy that different types of tariffs might have.

Trade agreements will furthermore not be taken into consideration here, even though their significance grew from the 1820s. Sweden signed a trade agreement with the United States in 1816, which partly undermined the Navigation Act that had levied higher tariffs on goods shipped on foreign vessels (more of which in chapter five). A deal with Russia in 1817 decreased tariffs particularly on those goods which were traded with Finland. A treaty with England in 1824 was the major trade agreement during this period; it lowered tariffs on certain Swedish goods as well as removed certain shipping fees, but more significantly it opened up for a stream of new agreements with Denmark, Prussia, the Netherlands, USA, and England again during the end of the 1820s and the beginning of the 1830s. The importance of trade agreements for Swedish tariffs was thus quite limited in a quantitative sense during this period and probably affected shipping and the Navigation Act more than tariff

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88 Montgomery (1921b)
89 Irwin (2002); Tena-Junguito (2009).
rates themselves, even though the qualitative importance of the first treaty with England in the 1820s should not be disregarded. A dissertation which had moved beyond the 1830s would likely have had to put more stress on the significance of bilateral trade agreements.

While tariffs are often used as an operationalization of trade policy, there is no escaping the fact that they touch on many other policy areas than just foreign trade. Heckscher for instance noted that Swedish foreign trade policy in its central parts should be regarded as intertwining with manufacture policy. He wrote:

Indeed, there was trade policy which was not manufacture policy and manufacture policy which was not trade policy; but to a very high degree the two overlapped nonetheless.

Hence, while the main focus here lies on the relationship between tariffs and foreign trade, one needs to bring up the area of manufacture policy for the sake of analyzing protection, as well as refer to fiscal policy to analyze tariffs as a source of government revenue.

With some caveats out of the way, it is time to focus in on a few research questions regarding Swedish foreign trade and tariffs between 1780 and 1830. A few things first. While Eli Heckscher, as mentioned earlier, thought it more useful to investigate the large number of trade bans that Sweden had in place during this period rather than tariffs, my focus will be on the latter – while still incorporating some of the trade bans into the analysis (see section 1.5). This dissertation will hence have a different focus than the latest contribution to the research on Swedish trade policy, wherein the number of trade bans (mostly on imports) were calculated and used as the main operationalization of trade policy. The dissertation will in some ways also clash with Heckscher’s asserted opinion that tariffs did not affect trade, since this will at least be put to the test. To be sure, this dissertation will not set out explicitly to disprove Heckscher, even though some of his statements have served as a motivation to investigate certain issues in certain ways. It will share certain similarities in time-frame and focus with Montgomery’s book on Swedish tariffs during the 19th century, but will have an earlier staring point and will have a larger focus on measuring tariffs, analyzing tariff structure and testing tariffs against trade.

There are thus a few questions that this dissertation wishes to address:

– What did the structure of tariffs look like and how did it develop between 1780 and 1830 in Sweden; i.e. how were tariffs set between commodities and over time?


92 See Jonsson (2005).
– How can tariffs be understood as trade policy? Was it mainly protectionism or fiscal need at play?
– What was the connection between the structure of tariffs and the structure of trade? Were there protectionist effects at work in practice?

There are also a few things that will not be done here, so some further demarcations and clarifications might be in order. First, it will not be an aim to fully explain changes in tariffs and tariff structure over time, even though such conclusions might be reached tentatively. Such explanations would probably need a larger exploration of the arguments and discussions behind the setting of the tariffs. Second, even though it is an aim to describe trade policy, the ideas and reasoning behind it will not be thoroughly explored. As such this is a dissertation with more of a focus on economics and policies, rather than a history of ideas and analysis of arguments. Third, as chapter six will show, there are of course factors other than tariffs that affect the flow and structure of trade. Question three above refers merely to the issue of whether protectionism and its effects can be spotted and isolated in practice. Did it really impede trade as it was set out to do?

1.5 General Methodology and Sources

Each of the two empirical chapters (four and five) and chapter six will contain its own more detailed methodological sections in order to provide an easier and more pedagogical entry into the specific questions dealt with.

The research questions at hand will be answered mostly with a quantitative approach, where one of the major aims is to present partly new series and figures on Swedish foreign trade and tariffs. Hence, much of the focus will lay on presenting descriptive statistics and the methodology for measuring them. In the case of both the figures on foreign trade in chapter four and tariffs in chapter five, a certain selection of which goods to include has been made based on the goods’ importance for the respective areas and the availability of data. This means that in terms of analyzing the structure of Swedish foreign trade and tariffs, the coverage of the two areas will not be entirely complete, even though I argue that the selection of goods is large enough to still make it possible to analyze and talk about structure.

The quantitative approach has been chosen for a number of reasons. First, the availability and richness of the quantitative material on Swedish foreign trade and tariffs allows for this type of analysis. Second, while it is possible to analyze tariffs over a long period of time in a more qualitative manner, such as Montgomery did, the quantitative method allows for analyzing structure in a way that would be made much more difficult with a method based strictly on an analysis of texts and arguments. Given the number of commodities that are needed in order to be able to speak of structure, it would be close to impossible
not to deal with them in a more quantitative manner. Third, a more statistical treatment of Swedish tariffs has not been attempted for this period before, which could possibly open up for new interpretations and results. While Heckscher, Gerentz, and Montgomery all looked at the same basic source material that I will be using, none of them really attempted to analyze the structure of tariffs in a way that the material allows for. Since the main focus is not on the arguments or discussions on tariffs, qualitative sources such as material from tariff committees or written communiques or proclamations from the government, as well as secondary sources that have made use of the same material, will be used only occasionally in the chapter on tariffs. They will be useful to highlight certain important features of how tariffs were set, but will not be employed as a complete exploration of how tariffs and commodities were discussed. Qualitative material from tariff committees will, however, be used to present how the process of setting tariffs came about: how the political control over the issue changed over time and how the setting of tariffs was administered.

Much of the quantitative material will be official data and publications on trade and tariffs from the central government and its administrative branches, mostly the National Board of Trade. Even though these original sources are mostly well-kept and thorough, they contain certain problems which will be dealt with in chapter four and five. They will be supplemented with price data from published secondary sources, both domestic and international.

One essentiality when dealing with the tariffs that should be mentioned here is how to handle the numerous import bans that were so prevalent during this period. As mentioned in the previous section, one possibility is to simply count the number of import (and to a smaller extent export) bans as a proxy for the restrictiveness of trade policy in its own right, as Patrick Jonsson did. I would argue that analyzing the level of tariff rates overall will be a better operationalization of the restrictiveness of trade policy than simply counting the number of trade bans that were in place at different points in time. One problem with the latter method is that it treats commodities of completely different importance equally; basic goods such as gingersnaps and sacramental wafers are given the same weight as textile and iron manufactures.93 One could further argue that it is not the number of trade bans that are the most important feature of a trade policy, but rather exactly what commodities are prohibited. An alternate method is to somehow incorporate the commodities banned from trade into the tariff measurements. This approach was, for instance, employed by Tena-Junguito et al. in an exploration of Latin American tariffs during the 19th century. There import bans were transformed into tariffs by taking the highest prohibitive tariff (on other commodities) and doubling it.94 Luckily,

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93 To name just a few of the items that were on the trade ban list during this period.
Swedish import bans often also had a tariff set. This was often, not to say always, of a prohibitive level similar to or the same as that of those goods that were not officially banned from trade. This makes it possible to include a number of import bans into the tariff measurement without needing to exclude them and deal with them separately. Exactly how this has been done is explained further in chapter five. Now, one can still argue that a trade ban is a more restrictive form of trade obstacle than a tariff of prohibitive levels. Heckscher argued for choosing a focus on bans rather than on tariffs based on the fact that just because a commodity had a set tariff did not necessarily mean that it could be imported or exported. It just meant that “the tariff rate entailed the amount that would be paid in the event that a special license allowed its [the commodity’s] import or export.” 95 Officially a license thus needed to be granted by the government in order to allow for a commodity on the prohibition list to be traded. With certain strategic commodities this licensing system is particularly stressed, such as was the case with the export of gun powder during the 1780s and 1790s. Some items on the prohibition list were virtually also non-tradable during the period, such as the import of bar iron. Other commodities continued to be traded consistently throughout their placement on the prohibition list, such as coffee and refined tobacco. This means that the system of bans and licenses may be regarded as more prohibitive than tariffs for certain commodities, but not for others. Some caution will hence be necessary in the reading of the tariffs, depending on whether there was also a trade ban on the commodity or not. I will try to make the reader aware of this when called for.

1.6 Outline of the Thesis
The following chapter will track the development of international trade and trade policy around the turn of the 18th century. Focus will be put on the major historiographical trends in these two fields in order to provide international context for the Swedish case. Does Sweden stand out in any way compared to other countries? While chapter 1 has provided some historical examples to theoretical discussions, chapter 2 will focus more explicitly on tariffs and trade during the period 1780 to 1830 and the impact of the Napoleonic Wars on the development of trade policy and international trade, mainly across Europe. Were there external factors which could have pushed Swedish foreign trade and trade policy in any direction? Chapter 3 will give more of a domestic context, as it puts forth important political events and some elementary economic trends between 1780 and 1830. In what kind of political and economic environment did Swedish foreign trade and trade policy operate? Chapter 4 is the first empirical chapter and will center on the development and

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structure of Swedish trade during the period. It will include a methodological
discussion on how to best measure Swedish foreign trade during this period
and based on those discussions provide partly new estimates on trade levels in
response to old methodological difficulties. Chapter 5 is the second empirical
chapter where the main research questions of the thesis will be explored.
Tariff levels will be presented for exports and imports at the aggregate level,
while tariff structure over a number of commodity categories will be explored
for imports. Certain focus will also be put on the fiscal side of tariffs, where
customs revenue will be presented on the aggregate level and by commodity.
Chapter 6 pulls together the two empirical chapters just outlined and will be
based on the model presented earlier in this chapter. The effects of tariffs
will be tested econometrically – more specifically their effect on trade levels,
alongside other variables – to determine whether tariffs were protectionist in
practice. Chapter 7 will provide a concluding analysis; what can we make of
the structure of Swedish trade and tariffs between 1780 and 1830?
CHAPTER 2
International Trade and Trade Policy from the Age of Mercantilism to 19th Century Liberalism

This section will map the development of tariffs and international trade roughly between 1780 and 1830, the main period of interest in this dissertation. The year 1815 will be shown to have been an important dividing line, where the end of the Napoleonic Wars would lead to more peaceful relations between the major European powers, the expansion of international trade, and the initiation of trade liberalization. While Findlay and O’Rourke have termed the period 1650–1780 “The Age of Mercantilism”, one could argue that this era extended until at least until 1815 when the Napoleonic Wars ended and Pax Britannica took over. The focus will be on the major powers of the time, England and France, but smaller nations of interest, such Denmark and the United States, will be discussed as well.

2.1 Tariffs and Trade Policy around the Turn of the 18th Century

The data on and historiography of tariffs and trade policy are generally much more scarce before 1815 than after. Much of what has been written on 18th century tariffs pertains to the major economic powers – England, France, and to some extent the Netherlands.

English tariffs had traditionally been low in the beginning of the 1700s, at around five percent on both exports and imports, but were increased on imports during many of the subsequent wars of the 18th century. This led to the English system becoming increasingly protectionist as the century progressed.1 French observers regarded the English regulation of trade during this time as being largely successful:

Measures such as banning or imposing high duties on the import of foreign manufactures, admitting raw-materials duty-free (a nice acknowledgment of the importance of “effective protection”), allowing the duty-free export of manufactures, and banning the export of domestic raw materials such as wool,

were regarded [by the French] as the height of mercantilist sophistication and responsible for England’s success.²

There was hence a certain structure to English trade policy during the early modern period where raw materials were imported at low or zero tariffs to be refined in domestic manufactures and industries and then exported duty-free. Foreign manufactured goods were thus discriminated against in favor of the domestic, while foreign raw materials were meant to serve domestic demand. Adam Smith noted how high British import duties discriminated against French wine, while France also maintained rather high tariffs for British exports.³

Tariffs were, however, not levied only for protection of domestic industries, such as textiles, but also out of revenue concerns. As the recurring wars of the 18th century put upward pressure on military spending, states needed to become more efficient in collecting revenue, and this occurred as the bureaucracy of the process became more centralized. Import tariffs were important in this regard, particularly for England, which extracted about a third of its tax revenue from the import tariffs on alcoholic beverages and tropical foodstuffs around 1800. This partly gave England an advantage over France. The English could collect twice the amount of tax revenue as the French during the majority of the century, with the figure being even three times as much during the Napoleonic Wars.⁴ During the whole period in question for this dissertation, tariffs made up on average 22.5 percent of total tax revenue in England as figure 2.1 shows. This figure was quite steady during the whole half-century, but increased to over 30 percent after 1825. About two-thirds of English customs revenue, at least during the late 1780s and early 1790s, came from imports which had no domestic substitutions, such as tea, tobacco, sugar, foreign spirits (especially rum), Indian cloth, and raw silk.⁵

One can notice briefly that there are examples of other countries during the same period that were even more dependent on tariffs for tax revenue. The newly independent American Republic got on average as much as 88 percent of its total revenue from customs between 1789 and 1830. The US differed from other countries in that its constitution completely banned the setting of tariffs on exports, which instead put high revenue-pressure on import tariffs, which were among the highest in the world during this period.⁶ By comparison, at the other end French customs revenue was not even 10 percent of total tax

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⁶ Northrup and Prange Turney (2003).
England and France signed the Eden Treaty in 1786, which among other things was to have decreased British tariffs on French wine and spirits, but most of all reduce tariffs generally, down to 10 or 15 percent according to Heckscher, while also removing import prohibitions. Little of the treaty was however realized, as hostilities between the powers restarted again in 1793 with the French Revolutionary War. The Napoleonic Wars (1803–1815) would then become the pinnacle of protectionist trade policies of the long 18th century. The trade war escalated between England and France, which resulted in mutual blockades between the two rival nations between 1806 and 1814. The Continental System was set up by French emperor Napoleon Bonaparte in November of 1806, with a proclamation that all trade with Britain and in British goods, or with ships coming from the British colonies, was to be prohibited. This was extended in the two Milan Decrees of November and December 1807 to encompass also non-British vessels carrying British goods. Britain, on her part, replied with the “Orders of Council”, directed at striking against the colonial trade conducted by Britain’s enemies and limiting neutral countries’ trade with France.

Eli Heckscher termed the system “a self-blockade” of the European continent, aimed at hurting British exports of processed industrial products and re-exports of colonial commodities. The consequences for England would

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be, in the hopes of Napoleon, “an ensuing ruin for the credit-system and unemployment within the industry.” After 1810 France felt forced to raise tariffs in order to try to further hurt British manufacturers and to encourage the development of French industry. Other continental European states also raised tariffs following the French policy, but not at all to the same extent as France. According to Lance Davis and Stanley Engerman, the Continental System was essentially a variant of a protectionist tariff used to develop French industry, but its effectiveness was short-run and industrial growth was limited in scale and scope during the war. “[A]s a policy for generating import substitution, the French policy was expensive and not effective”, conclude the two authors. François Crouzet characterized the protection during wartime as “extreme”. Cotton textiles, the production of beet sugar, and the chemical industry grew as a result, but other sectors experienced a loss in production as the import prices increased as a consequence of higher tariffs and the blockade. Ronald Findlay and Kevin O’Rourke hypothesized that French import-substituting sectors such as cotton textiles probably “benefitted from the absence of British competition”, while sugar-refining and linen exports suffered from the disruption of continental trade. The experience was similar in other continental nations. Charles Kindleberger wrote that the protection that was given to French industries, such as cotton spinners and other textile producers, during the Continental System was continued in 1816 and even expanded in the 1820s. The resulting impact on the French economy was that it was transformed “from an outward-looking to an import-competing, inward-looking one.”

The adverse effects of the blockades and wartime protectionism was felt not only in France and the rest of continental Europe. According to Crouzet, Norwegian industries such as iron making and timber sawing were severely damaged. Countries like Spain, Portugal, and Sweden which fell into the economic orbit of England during the wars suffered a crisis or a collapse of their traditional industries without any compensating rise of new ones.

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10 Ibid, p. 52.
11 Crouzet (1964).
Joseph Nye sees the end of the Napoleonic Wars as an important shift for British policy, especially in its turn from agricultural interests towards supporting the interests of manufactures. This would in 1815 mean an end to export subsidies for agriculture. Nonetheless, British legislators imposed import tariffs on corn when prices fell below a certain level, known as the Corn Laws, which would remain in effect until 1846. The end of the war and the accompanying economic warfare and trade blockades in 1815 would also bring about major changes in trade policy around Europe:

On the one hand, the blockades gave rise to protectionist lobby groups in key Northern economies, who had benefited from trade disruption, and who would do everything in their power to impede any subsequent moves towards free trade. On the other hand, the wars brought an end to several trade-restricting features of the eighteenth-century mercantilist international system.17

Economically dire times resulting from the war further accelerated governments’ move toward protectionist measures in several countries, so that trade policies around Europe were “almost universally protectionist” after the end of the Napoleonic Wars in 1815. This is what Paul Bairoch eloquently called “an ocean of protectionism surrounding a few liberal islands.”19 These islands, the exceptions to the rule, were found in smaller countries such as the Netherlands, which implemented a liberal trade policy in 1819, and Denmark, which to a large extent had removed import bans and had lowered tariffs in 1797.

Eli Heckscher remarked upon the liberal Danish policy with awe, and described it as “the most radical tariff-reform known at the time.”20 Other accounts have considered the policy as fairly liberal for its time and a “clear break with Mercantilist thinking”.21 According to Hansen in his work on Danish economic history, the tariff revision of 1797 went “halfway” and bore signs of a moderate protection policy which was “as far from mercantilism as it was from free trade.”22 Becker-Christensen saw the new tariff law as ending a period of “high-protectionism”, and as being a result of a gradual transition towards a more liberal policy, where Danish economic thinkers had started proposing changes to the prevailing system as early as the 1770s. The

commission which put forth the new law had also had ten years to prepare it. Aage Rasch concludes that when tariff reform came about in 1797, it was due much to the failure of the older protectionist system, for instance in safeguarding a positive balance of payments. The reduction of import duties and the removal of several import bans would also deal with the issue of rampant smuggling, it was widely believed by contemporaries. Danish economic policy was generally quite heavily influenced by thinking in the Netherlands, but according to Rasch inspiration from other countries had no decisive effect on those who formed the new policy. Denmark also raised its tariffs during the Napoleonic Wars in order to adjust for the extreme inflation and to collect revenue for war efforts. This means that specific tariffs were raised across the board by 12.5 percent in 1803, 12.5 percent in 1807 and by 50 percent in 1810. Danish agricultural protection would come to be initiated after 1816 when tariffs on cheese, butter and beef were increased.

The Prussian tariff adopted in 1818 was regarded by contemporaries as one of Europe’s lowest, and certainly was low compared to those of Britain. Prussia, however, maintained high tariffs on coarse yarns and textiles and generally maintained a policy of promoting domestic manufacturing over British imports.

Paul Bairoch’s classification of comparative commercial policies in Europe around the end of the Napoleonic Wars, summarized in table 2.1, focuses mostly on policies towards the import of manufactured goods. Here a distinction can be made between those countries that used import bans, those that maintained rather high tariffs and those with low tariffs. Note that all countries included had at least a moderate level of protection of domestic agriculture. The classification gives little information on the tariff structure in different countries, and the average import tariff on manufactured goods is estimated. Bairoch’s analysis, however, shows Denmark as a country with overall moderate protection, while the Netherlands and Prussia seem to be the most liberal countries and France, Sweden and the United Kingdom to be among the most protectionist overall. Bairoch also included Portugal, Russia, Spain and Switzerland in his table, but I have chosen to exclude them here for the sake of brevity. It can be mentioned briefly that all four countries used export tariffs, and all countries had moderate (Russia and Switzerland) or strict (Portugal and Spain) degrees of agricultural protection. Portugal

27 Kindleberger (1975), pp. 41–42.
and Switzerland maintained somewhat liberal policies towards imported manufactures, while Russia and Spain were more like England, France and Sweden in this regard.\textsuperscript{28}

2.2 International Trade around the Turn of the 18\textsuperscript{th} Century

According to Francois Crouzet, English foreign trade (exports, re-exports and imports) was 2.4 times larger in 1784–1788 than it was in 1716–1720. During the same period, the French trade had grown by a factor of three. Intercontinental colonial trade explained much of the French growth, which grew tenfold from the late 1710’s to the 1780’s and made up 40 per cent of total trade towards the end of the century.\textsuperscript{29} Trade markets outside of Europe expanded, which for England meant Asia, the United States (an important market for domestic exports) and the smaller Brazilian market, while France traded mostly with Spanish America and could re-export sugar from her West Indian possessions.


On the aggregate level, Kevin O’Rourke and Jeffrey Williamson have estimated that Europe’s trade with other continents grew at about 1.26 per cent per year on average in the 18th century, compared to 0.66 per cent per year during the 17th century.  Even though intercontinental trade became more and more freight-demanding, with “bulkier and bulkier commodities” increasing their market shares, for instance shipping iron rather than spices, trade costs such as tariffs still mattered greatly for which commodities were valuable to trade in over long distances. This is evident in the fact that European imports from the Americas by the end of the 18th century still were “high value-to-weight commodities, which could bear the cost of transport….”

International trade also expanded over the course of the 18th century as a result of the introduction and expansion of “new” goods. Fernand Braudel tells the story of strong alcohol such as brandy, which was created in the 15th century, was refined in the 17th and eventually became popularized and more widespread in the 18th century. A similar story can be told of “colonial” commodities we take for granted today, such as coffee, sugar and tobacco. These goods were not uncommonly produced in the “New World” of the Americas for instance and then brought into Europe for consumption.

The Napoleonic Wars and the trade war between England and France would come to greatly affect international trade. The British saw both a slower growth in exports and imports during the years of blockade compared to the preceding years, when exports grew 3.1 per cent per year between 1802 and 1814 while the increase had been 6.4 per cent per year between 1781 and 1802. Imports increased with 1.2 per cent per year in the latter period, compared to 5.4 per cent year before the blockade. Davis and Engerman, however, contribute this more to the war itself than the blockade and its protectionist tariffs. The blockade could not fully deter British trade with continental Europe either, since the loss of trade with France and its allies was offset by an increase in trade with Spain and Portugal, countries which had liberated themselves from Napoleon’s rule. The French experienced decreased import levels, which were sharpest from 1811 to 1814 and affected their trade with several European countries, particularly the German states, during the Continental System. Furthermore, the French exports to its colonies fell to almost zero between 1798 and 1814. Both French and English trade picked up again once peace was restored after 1815. In O’Rourke’s estimation, the blockade and the war hit France and United States the hardest, which both had their import levels decreased by half, while the effects on Britain were

34 Ibid, pp. 44–45.
much smaller.\textsuperscript{35} A side-effect of the Napoleonic Wars and its trade war was that the neutral United States got a boost in its re-exports during the first part of the war, mainly through shipping French colonial goods to France. There is, however, no consensus as to whether this had any larger positive impact on the American economy, or if the temporary growth in re-exports just crowded out domestically produced exports.\textsuperscript{36}

The war and the blockades severely affected international trade, and therefore also took their toll on import prices in many countries. The price of pepper, here relative to wheat, doubled in Holland and increased threefold in France between 1807 and 1814. The import prices of raw cotton and sugar also rose on the European mainland, while Britain did not feel the same effect on the prices of such non-European imports.\textsuperscript{37} The relative prices of imports compared to exports increased significantly, not only for belligerents on the European continent, but also in neutral Sweden and the United States. Heckscher’s statement that the blockades became virtually ineffective due to smuggling and corrupt officials has been heavily refuted by Kevin O’Rourke:

It is clearly implausible to claim that the blockades and embargoes of the French Revolutionary and Napoleonic Wars were so undermined by smuggling and corruption that they had no economic impact. Rather, the wars seriously impeded trade, not just in Europe, but across the globe.\textsuperscript{38}

The end of the Napoleonic Wars and its economic warfare meant the beginning of a turn towards international trade being conducted on a more multilateral basis with lower transportation costs. Inland waterways such as canals greatly reduced transportation time and cost on the European continent, in Great Britain and perhaps mostly in the United States. The Erie Canal, which was constructed between 1817 and 1825, made the trip from New York to Buffalo thirteen days shorter and cut the transportation costs by 85 per cent.\textsuperscript{39} New markets for European trade opened up further. The weakening of the Spanish and Portuguese Empires, yet another by-product of the Napoleonic Wars, loosened their earlier tight grip on the Latin American continent. By the 1820’s Spain maintained control “only” over Cuba and Puerto Rico. This meant the loosening of some colonial trade restrictions, and British trade with Latin America for instance increased incredibly in a short time. The share of exports of manufactured products to Latin America rose from a mere 0.06 per cent during the 1780s to 3.3 per cent in 1804–1806, 6.3 per cent ten years

\textsuperscript{36} Findlay and O’Rourke (2007), p. 367.
\textsuperscript{37} O’Rourke (2006); Findlay and O’Rourke (2007), pp. 369–371.
\textsuperscript{38} O’Rourke (2006), p. 146.
later, and eventually 15 per cent in the mid-1820s.\textsuperscript{40} On the aggregate level, intercontinental trade grew more rapidly than before. The growth had been averaging at a little over 1 per cent per year between 1500 and 1800, but was to be around 3.5 per cent per year after 1815. This growth was in all likelihood more rapid after 1840 than during the preceding three decades.

2.3 Summary

Trade policy was in all essence restrictive and tariffs were usually high throughout Europe and in the US towards the end of the 18\textsuperscript{th} century. The Napoleonic Wars meant a strengthening of the protectionist policies that had been developing during the 18\textsuperscript{th} century as the blockades and economic warfare between England and France would result in increasing tariffs in both countries. The war and the blockades seriously disrupted trade and increased prices in many countries, but also affected trade policy in the short term. Protectionist interests in the Northern economies which had not benefitted from trade disruption were strengthened, and agricultural protection was intensified in England with the adoption of the Corn Laws. One can wonder, along the lines of Findlay and O’Rourke, whether the Napoleonic Wars in the long run delayed trade liberalization in Europe? Paul Bairoch’s classification of trade policy around Europe seems to suggest that protectionism remained strong in the 1820s, as most countries maintained high tariffs or import bans of foreign manufactures and more or less all countries protected domestic agriculture to some degree. Even supposedly liberal trade countries such as Denmark, the Netherlands and Prussia safeguarded domestic agricultural interests right after the end of the Napoleonic Wars.

Tariffs during this period were often set for protectionist reasons, but evidence from England and US show that they also had a big fiscal importance, even if this was much less evident in a country like France. In England customs revenue even increased as a share of total tax revenue after 1825, to reach over 30 percent.

The Napoleonic Wars can hence be seen as an important demarcation line here, as they not only had a disruptive impact on trade, but also affected trade policy in the short term – by for instance strengthening agricultural protectionist interests in several European economies and possibly also retarding the liberalization of tariffs and other trade restrictions.

\textsuperscript{40} Davis, R. (1979). \textit{The Industrial Revolution and British Overseas Trade}. Leicester: Leicester University Press, p. 88.
3.1 Political Changes Around the Turn of the 18th Century

Gustav III had seized power in a coup in 1772, and so began the Gustavian Era which would last until 1809. It effectively ended “The Age of Liberty” and meant restrictions to freedom of the press and overall greater political power for the royal majesty and his government to the detriment of the parliamentary Diet (Ståndsriksdagen). The constitution of 1772 stated that the king had power over foreign policy, although he could not initiate war on his own, controlled economic and administrative legislation and decided how to allot the state’s tax revenue. The Diet was composed of members from the four estates – burghers, nobles, clergy, and peasants. It decided on issues of taxation (but not how the revenue was used), shared legislative power with the king when it came to public law (other than economic and administrative issues), approved of the declarations of war, and had power over the National Bank, Riksbanken.

In the midst of war with Russia in 1789, Gustav III pushed through an amendment to the constitution which further increased his power. He could now start war without the approval of the Diet, initiate laws completely on his own and had full power over public administration. The Diet on its part got expanded rights to control the public debt through the formation of the National Debt Office, Riksgäldskontoret. In the parliamentary session of 1789, the king made sweeping social reforms for the commoners, which aggravated the nobles who now felt the king had to be dealt with. The plan was to assassinate the king and then seize power in a military coup. Gustav III was shot in March of 1792, but since the shot was not directly fatal the coup came to a halt. The king, however, died two weeks later. Since his son, Gustav IV Adolf, was too young to take the throne, a regency administered the regal power until 1796. Gustav IV has been described as being “careful and bureaucratic” and as a “lonely stiff man with limited abilities, mentally instable but by no means a fanatic”.¹ Like his father, he was opposed by the

nobility, but had support from the commoners in the parliament when it came to issues of the state’s finances. The country, however, ran into problems as Russia attacked in 1808. While public officials and the military wanted to end the war, the king wished to “continue fighting at whatever cost”. The opposition towards the majesty’s handling of the war in the end became too great and part of the national army and high military officials arrested him on March 13, 1809. Gustav IV renounced the throne March 29th the same year.

The war with Russia cost not only royal control of political power, but also the life of 20,000 men and the realm of Finland, which was seceded to the Russians in September of 1809. In yielding Finland, Sweden lost one third of the kingdom’s area and one fourth of its population. The year 1809 marks a milestone in modern Swedish history, because it also saw the signing of a new constitution following the coup. As a result, the new king, Karl XIII, would not enjoy the same autocratic power as his brother, Gustav III, had done. Even though the new constitution was partly built on its older versions from the Gustavian Era and the Age of Liberty, it now more than ever before drew up distinct regulations for the division of power between the king and the Diet, as well for the rights, power and organization of the parliamentary Diet and the four estates. A general guideline was balance, particularly between the executive branch, the king and his cabinet, and the legislative branch, the Diet. It should, however, be noted that both the king and the Diet could initiate new laws and policies, which needed the approval of both branches to pass. With regard to economic legislation, the Diet could voice its opinion and initiate proposals for new legislation, or for the change or removal of old. Such proposals could be sent for investigation to the standing committee on appeals and economy, Besvärs- och ekonomieutskottet, which consisted of 48 members from the Diet. This standing committee was consultative and had no right of decision-making, which also applied to the Diet itself. This left the king with the final word in economic legislation, after consulting with his cabinet. The king could, however, share the decision-making with the Diet if he so wished, which occasionally also occurred in practice. The right of taxation, on the other hand, was now brought back to the Diet, a right which had been restricted since 1789. Paragraph 57 stipulated the “ancient right of the Swedish public to be taxed, exercised by the Diet’s estates alone at public parliamentary sessions.” In essence this meant that new taxes could

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6 The original wording reads: “Svenska folkets urgama rätt att sig beskatta utöfvas af rikens ständer allena vid allmän riksdag.” §57.
not be imposed without the approval of the Diet. A closely aligned issue was the one regarding appropriations, bevilling, among which tariffs for foreign trade and other indirect taxes, such as the excise tax, were categorized. It was stated that “no general fees could be raised without the approval of the Diet of the four estates.” According to Hildebrand, this phrasing, however, signified an indirect recognition of the king’s right to decrease such fees and taxes. This right was in practice also acknowledged repeatedly by the Diet and the standing committee on the constitution before 1866, and was not considered to be in violation of older Swedish practices. Hence, tariffs could not, according to the constitution, be increased without the approval of the Diet, but they could be decreased unilaterally by the king and his cabinet. Exempted from this were, however, the duties on both incoming and outgoing grains, which could be increased without any approval by the Diet.

When Karl XIII passed away in February 1818, the throne was passed to his adoptive son Jean Baptiste Bernadotte, a French field marshal who had been brought in as crown prince and heir of the throne in 1810. He took the name Karl XIV Johan and would remain king until his death in 1844. According to Montgomery the new regent’s views on trade policy were closer to protectionism than anything else. It has been suggested that the king’s conservative economic stance hampered Swedish economic growth and the industrialization process. Karl XIV Johan firmly believed in the handicraft textile production and traditional sawmills, rather than mechanized looms and steam sawmills. There are some indications that the new regent became a divisive leader. It has been reported that conflict was constantly present between the king and his advisors and that this paralyzed the government’s work – mostly in the treatment of key financial issues and proposals to the parliament. Per Andréen has written that “opinions were often divided in the government and each faction had its supporters in the estates. The government’s vacillation or passiveness in important questions was due mainly to the prevailing tension and the struggle between the conflicting wills.”

3.2 Economic Policy Around the Turn of the 18th Century

Swedish economic policy during the 18th century was mercantilism driven to its extremes, to use Eli Heckscher’s terminology. He described the policies

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7 RF, §60. Original wording reads: “Ej må några allmänna afgifter, af hvad namn och beskaffenhet som helst, utan rikens ständers samtycke kunna förhöjas…”
8 Hildebrand (1896), p. 645.
as generally being characterized by “for a long time uninterrupted, tightened up, regulation”. Results in the form of accomplished reforms were generally “insignificant”, according to Heckscher.\textsuperscript{12} Lars Magnusson has shown how widespread it was among 18\textsuperscript{th} century mercantilist writers to argue for manufactures in the cities to the detriment of protoindustrial handicrafts in the countryside. Handicrafts would not, it was believed, promote a larger domestic market nor create specialization between different economic sectors, as the manufactures would.\textsuperscript{13}

Some economic activity during the period, such as handicrafts, was organized in trade guilds, which had been in place since the 1720s. The guilds had the right to ban the establishments of all craftsmen or businessmen who were not part of the guild. The system also established a strict hierarchical division between master, journeyman and apprentice. The only place in the country where free competition and the free right of establishment ruled was the town of Eskilstuna, which was given the right of “free town” in 1771. The prevailing system of trade guilds would not be abolished until 1846, the first step of moving towards freedom of trade (trade here meaning industry or enterprise), which would then come to be expanded in 1864.\textsuperscript{14}

Manufacturing, mostly in textiles but also in tobacco, sugar, leather, metallurgy, glass, paper and porcelain, were not bound by the regulations of the trade guilds. These sectors were controlled under the general regulation of the manufacturing trades from 1739. Special legal authorities for the monitoring of manufacturing were set up, and financial support from the state was implemented. Manufacturers were not regulated as strictly as handicrafts: there was no restriction in how many workers that could be hired, and there was “widespread freedom of trade.”\textsuperscript{15} Certain liberalizations were, however, carried out during this period with regard to how new manufactories could be established. Towards the end of the 1790s, it was decided that wool factories could be started in the countryside, and not be exclusively tied to towns as before. In 1815 this was extended so that other types of manufactories could be granted exemptions from the town privilege.\textsuperscript{16}

There has been some debate regarding whether this state support of manufacturers was effective or not. On the one side, hard line critics such as Sven Gerentz have argued that domestic manufacturing did not provide the best products at the lowest prices, that they employed a low number of people in total, and added little to the collective production of the country. He came to the conclusion that political interests and state funds were “wasted” on this

\textsuperscript{12} Heckscher (1949), pp. 17, 19.
\textsuperscript{13} Magnusson (1999), pp. 257–258.
\textsuperscript{15} Ibid, p. 214.
\textsuperscript{16} Gerentz (1951), p. 284.
sector. Eli Heckscher was also doubtful and argued that for instance textile manufacturing could not exist on its own when government support waned in the 1760s. There was furthermore no reason to suspect that there was enough demand for Swedish-produced textiles on the European market and that future prospects for expansion were always going to be glum. On the other side, Per Nyström and Olle Krantz have questioned Heckscher’s statement and have shown that those textile manufacturers that disappeared during the 1760s were generally the weakest ones and that production per worker and loom actually increased markedly afterwards.

3.3 The State of the Swedish Economy 1780–1830

This section will present a couple of key economic factors to track the development of the Swedish economy during this half-century. General features and the composition of the economy will be important to understand the basis for the possible restrictiveness of trade policy. The structure of the general economy may have been reflected in the structure of trade and the structure of protectionism. Some background on the finances of the central government will be given in order to shed some light on the state’s fiscal needs. Chapter one showed for instance that British and American examples from the 18th and 19th centuries indicated that high levels of foreign and domestic debt put some fiscal burden on tariffs. Something similar could have been present in the Swedish case.

Figure 3.1 shows a decline of the Swedish economy towards the end of the 18th century and the beginning of the 19th. Between the high point of 1791 and the low point of 1809, there was a decline of almost 35 percentage points. A turn would come after 1809 as economic growth picked up again and gained back some lost ground during the 1820s. This would slowly initiate a period of increasing growth and industrialization which would carry on throughout the century. A further indication of the stagnant economy was that urbanization rates were generally very low and constant at slightly over five percent during this half century. More information is provided in figure 3.2 which splits up GDP by economic activity.

Sweden was still very much an agricultural economy (and society) throughout this period, with agriculture making up around 40 percent of GDP. Manufacturing played a minor role compared to agriculture, remaining steadily at ten percent of the national economy. By the 1780’s and 1790’s ironworks had, however, become “by far the most widespread technologically

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**Figure 3.1 GDP/capita Index 1780–1830 (1800=100)**


**Figure 3.2 GDP by Sector as Percentage of Total 1780–1830**

advanced Swedish industry”, which spurred technological development as well as trade institutions to oversee production quality.\textsuperscript{21} Agriculture was at the center of growth during the first half of the 19th century, and even though the expansion was fairly slow “output increases were sufficient to feed a growing population, create an export surplus and offer new markets for industry.”\textsuperscript{22} Manufactures did not account for more than around ten percent of GDP during this period. Private services, such as domestic trade, were instead quite a big sector, steadily around 20 percent of total GDP. Public services, of which a large part were military services, generally accounted for a larger part of GDP in the beginning of the period than they did during the last three decades after 1800. Overall this paints a picture of an economy that was quite static; there was not a lot of movement between different sectors during these 50 years.

Between 1800/1804 and 1826/1830 crafts were the part of the industrial sector that experienced the largest annual change in production, with about 1.1 per cent average growth per year. Factories and manufactories were not far behind, increasing with 1 per cent per year. Facilities in rural areas, such as brickworks, dairies, and sawmills, grew by about 0.8 per cent per year, while the expansion of mining was more modest, 0.2 per cent each year. Generally the previously dominant iron industry grew slower between 1800 and 1850 compared to the rest of the manufacturing sector.\textsuperscript{23}

Inflation was rampant over the course of the half-century, and particularly so in the middle of the period. Expressed as Consumer Price Index (CPI), prices in Sweden quadrupled between 1793 and 1812. The effect of war is clearly visible here, as the most rapid increases occurred first during the French Revolutionary War (1793–1800) and then during the height of the Napoleonic Wars (1805–1812). The second rise also coincided with Napoleon’s trade blockade against England. Prices then stagnated after the end of the war in 1815, and for some products, such as coffee, cotton, spices, sugar, and tobacco, even decreased.\textsuperscript{24} It should be noted that the largest part of the CPI for this period is made up of different foodstuffs, with grains, dairy and pork being the single most important goods. Prices on wood and iron together make up only around seven percent of the index.\textsuperscript{25}

The Swedish government found itself running deficits in its central budget throughout most of the period, with peaks at the end of the 1780s and the beginning of the 1790s and again in 1808 and 1809 during the war with Russia over Finland. At its highpoint the budget deficit was a staggering eight million


\textsuperscript{22} Ibid, p. 50.

\textsuperscript{23} Ibid, pp. 74–75, 90.

\textsuperscript{24} Ibid, p. 71.

The deficit was then quickly turned around to a large surplus (negative numbers here indicate more revenue than expenditure) in 1812 and 1813. The 1820s was marked by smaller fluctuations and a more stabilized budget with a slant towards slight deficits. It should be noted that certain differences existed over time as to what was included in revenues and expenditures in the central government proper. Before 1809 a number of special funds (such as Konvojfonden and Krigshusmanskassorna) and the National Debt Office had separate budgets and earmarked revenues. After 1809 these were, however, dissolved and brought into the ordinary budget, while the National Board of Trade was financed off budget between 1809 and 1874. The inclusion or exclusion of the budget of the National Board of Trade makes very little difference, however, to the total budget over this period, according to Fregert and Gustafsson.26

Revenue concerns were generally prevalent in Sweden during this period and particularly during the Gustavian era when the divided fiscal power between the king and the Diet constrained his possibilities to raise tax revenue unilaterally. For this Gustav III and his successor Gustav IV needed the approval of the Diet. Patrik Winton has shown that Sweden had greater problems than neighboring Denmark with servicing foreign and domestic debts with government revenue. The Danish fiscal authority was less divided and the king’s power in this regard was less constrained and could therefore

raise revenue more efficiently. Gustav IV was restrained by the fact that he would have needed to summon the Diet in order to increase taxes, something he did not want to do between 1803 and 1809. Between 1800 and 1808 Denmark was able to double its total government revenue, which Sweden was not even close to doing during the same period.

The large increase of government debt towards the end of the 1780s was very much connected to rising military expenditure for the war against Russia 1788–1790. During the 1790s foreign debt was running at around 10 million SEK per year, while the domestic debt increased from 11.7 million to 19.2 million during the decade, partly because of the budget deficit. During the following ten years, fiscal concerns continued, not only to service debts, but also to maintain a standing army that got involved in warfare. The lack of sufficient government revenue meant that Sweden had to rely heavily on British subsidies as part of the struggle against Napoleon. In 1808 a third of total government income came from a British direct subsidization of close to 5.5

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Klas Nyberg has argued that Sweden’s financial situation was so grave that the state “was almost bankrupt” by 1809 after war with Russia, although he does not define or explain this bankruptcy situation. The ensuing loss of Finnish tax revenue aggravated this state of affairs. Total central government debt decreased however after 1812, particularly steadily after 1814. In 1829 the debt was less than a fourth of the peak of 28 million SEK in 1811.

### 3.3 Summary

Just as the Napoleonic Wars had a significant impact on international trade and trade policy around Europe, 1809 was a marquee year for Swedish political life during this half century. The new constitution broke four decades of completely authoritarian rule, and the Diet would come to play a more decisive political role during the 1810s and 1820s than during the Gustavian Era of the 1780s and 1790s. Small changes were made in economic policy during the period, but the major pillars of the mercantilist regulatory system remained.

The economy was stagnant both in terms of growth and the relative position of the dominating economic sectors. Agriculture maintained its strong position during the whole period, even though there was some growth in the number of newly established manufactories, brickworks and sawmills between 1800 and 1830. The state’s finances were in dire straits during the first half of the period.

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30 Winton (2012), p. 443. This refers to riksdaler banco, as will be done henceforth whenever “riksdaler” is the mentioned currency.

when government deficits were ever-present and the possibilities of raising more revenue were slim. As a result the government was forced to borrow, and both domestic and foreign debt increased heavily from the end of the 1780s to the beginning of the 1800s. The situation improved after 1815, however, as the debt decreased and the budget became more balanced.

The domestic situation hence presented both opportunities and difficulties for the possibilities of changing trade policy. If 1815 is chosen as a demarcation line, just as in the case of the international context presented in chapter two, then a couple of plausible scenarios can be postulated. First, the change in the political landscape after 1809–1810 partly pulled trade policy from the grip of the government and put it more into the hands of the parliament. Trade policy should thus have been more of a contentious political issue after 1810 than before. Second, the stagnating or even declining Swedish economy before 1815 must have concerned contemporary policymakers. This should either have prompted calls for changes in economic policy or have deepened a belief that more of the same mercantilist regulations were needed. Third, the grave financial situation, particularly during the first half of the period, likely meant that the government exhausted every possible source of revenue, as indicated by the increasing reliance on borrowed money and brief infusion of large British war-subsidies.
CHAPTER 4
Swedish Foreign Trade 1780–1830

The development of Swedish foreign trade and shipping during the mercantile pre-industrial era has been described in detail for instance by Eli Heckscher and Staffan Högberg. One issue which always recurs in their and their successors’ accounts is the nature of the statistics on exports and imports and their reliability and usability. A large part of this chapter will be dedicated to dealing with old problems found in the trade statistics, while partly new value series will be presented in order to analyze the structure of Swedish exports and imports between 1780 and 1830.

4.1 Background – Swedish Trade and Shipping During the 18th Century

Swedish shipping and foreign trade experienced a tremendous expansion during the 18th century, something that even caught the attention of Fernand Braudel in his grand work on global history. He for instance noted that there was an export surplus, in accordance with the mercantilist idea of promoting exports and limiting imports and characteristic of English and French trade, also in Swedish trade during the century.1

Both Eli Heckscher and Staffan Högberg have found that Swedish shipping was twice as large in 1805 compared to 1734 in terms of incoming and outgoing cargo. This would mean an average increase of about one per cent per year. Where the two authors differ in their analysis is whether this also coincided with an increase in foreign trade. Heckscher did not find any significant difference during the period, while Högberg on the contrary found an increase in exports and concluded that the boom in shipping must have been due to an increasing need for tonnage for foreign trade, due to an increase of freight-demanding “bulk” commodities such as iron.2 Heckscher instead described the years immediately after 1807 as “without the least doubt the most colorful during the entire long period 1720–1815” and the changed which occurred as “obviously a course without any precedent in the past.”3

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Iron usually dominated among exports, particularly bar iron, while semi-manufactured iron such as bolt iron and bundle iron saw larger export increases during the 1770s and 1780s. Commodities such as pitch and tar were exported in greater quantities steadily throughout the 18th century, even though the increases were most accentuated during times of war when the demand for the two commodities rose. Forestry goods such as battens and timber would increase towards the end of the century. Timber had been a negligible export item before the 1770s. Export of salted herring boomed in the end of the 1750s and beginning of the 1760s and continued to grow until it peaked around the turn of the 18th century.

The emergence of herring as an export commodity partly explains the increase in salt imports during the second half of the 18th century. Sweden had no domestic production to speak of and was completely dependent on the import of salt for herring exports and food preservation. Due to the need for salt in the herring trade, not all imported volumes were destined for domestic consumption. Grains were the other major import commodity during the century, even though fluctuations were recurring due to varying harvests. Rye, the main ingredient in bread, was altogether the single most important cereal; during the entire century it was imported in greater quantities than all other cereals combined, even though malt and barley could be significant imports during certain periods. Among the more important imports one should also mention textiles, wool, cotton, and silk foremost, which formed an integral part of the domestic manufacturing sector.

4.2 Swedish Trade Statistics – The Need for a Revision

Swedish trade statistics have been compiled by state officials on the national level since the early 18th century, with annual figures on foreign trade being compiled by the National Board of Trade since 1739. Figures from around the turn of the 18th century have been shown to be problematic for several reasons. The use of the monetary value as reported by the National Board of Trade has been the subject of some discussion, where for instance research done by Ernst Söderlund in the 1950s showed that these figures cannot be considered reliable. The basis for both the export and import values were

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5 Ibid, p. 146.
8 Ibid, p. 190.
price estimations, which are sometimes described as “unit values”. From 1783 to 1807 average values were used for imports based on “every good’s ascertained usual value”. These average unit values remained completely unchanged, not adjusted for any price changes or inflation, until they were increased for “some imported goods” (unspecified exactly which) in 1807 and 1811. Rolf Vallerö stressed that import prices were harder to come by during the escalation of the Napoleonic Wars, coinciding with the economic blockades, and it is not certain whether foreign price courants were used or not in creating the value increases of 1807 and 1811. Vallerö argued that these value series were so unreliable that they should not be used at all to describe any longer trends. Export values were generally more certain, as they were based on contemporary price courants from Stockholm. One can also add that there are gaps in the value series, where figures for the years 1783–1786 and 1789 are completely missing.

Another issue is that a serious break occurred in how the trade statistics were dealt with after 1813. Whereas the trade balances earlier were presented in the pure currency, riksdaler banco, and calculated from domestic prices for exports and international prices for the imports, from 1816 they were calculated as a toll-value. In this case, the basis for the statistics was made up of price estimations, which were not changed yearly to reflect inflation or changing export and import prices. Thus the original figures from the National Board of Trade were based on different methods and price estimates before and after 1813, and using them would make it difficult to achieve coherent series for the period 1780 to 1830.

So there are basically two problems that need a solution: import figures are unreliable and probably heavily underestimated for most of the period, particularly before 1807, and there is a break after 1813 in how values of exports and imports were estimated. This could be solved basically in two ways: (1) using quantitative measurements based on weight, capacity, length, etc. for each commodity, or the number of cargos or freights on the aggregate level; (2) creating new series of value with other price estimations as a base.

The first was the method preferred by Staffan Högberg in his work on Swedish foreign trade and shipping. This method has the advantage of being able to use more complete and reliable series from the National Board of Trade compared to the value series. There are for instance fewer years and commodities which have missing data. It however has the big disadvantage that being able to compare between commodities of different quantitative measurements becomes difficult: how does one weight a ship-pound of iron to a cask of rum? Standards for quantitative measurements also tend to change several times over time, which makes matters more complicated. This would also make

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12 Interestingly, the problem of unchanging unit values in Swedish trade and tariff statistics was still present towards the end of the 19th and early 20th centuries. See Bohlin (2005), p. 11.
it more difficult to create groups or categories of commodities. Quantitative measurements can, nonetheless, still be useful when comparing commodities that have comparable units, such as number of liters of wine and beer, which I will also do when called for. However, the second plausible method allows for solving the major problems with the original statistics noted above. The key is available foreign price series which can be used to estimate partly new import values (more on which in section 4.2.2). This would create series that overcome the break made in 1813, as we have foreign price data extending over the time period 1780–1830. It would also create more reliable estimates for imports, and exports, as the price data naturally includes changing prices that occurred during the period, particularly between 1792 and 1815 as we could see from figure 3.3 in the previous chapter.

4.2.1 Smuggling and Trade Statistics

The issue of smuggling will not be assessed here, mostly because there to date has not surfaced any sufficiently theoretically and empirically built methodology for dealing with the extent of smuggling in regards to trade statistics. There is little or no help from earlier research when wanting to know how it affected trade between different commodities and over time. Paul Bairoch has argued that smuggling was widespread and estimated that it probably created a statistical margin of error of about 20–25 per cent for figures between 1800 and 1820, and that it most likely affected imports more than exports.13 This is for Europe in general, and there is no way of knowing if all commodities were affected in the same way. Eli Heckscher on his part believed that the smuggling of textiles must have been the most widespread and that it would have been rather equally distributed over time. Smuggling plays a vital role in his analysis of Swedish trade statistics during the late 18th and early 19th centuries. Heckscher’s figures (based on the original source, from the National Board of Trade) showed an export surplus for more or less the entire 18th century. He explained that this surplus must have been illusory, since contemporaries if anything assumed that there was an import surplus. What constituted this difference must have been smuggling, which according to Heckscher should have made up a fifth of the total import value, meaning that the “import-account would need to be raised by a fourth in order to be true.”14 Heckscher admitted that such estimations of smuggling were “very uncertain.” It would hence be very incautious to try to adjust the trade statistics based on rough and broad estimates, when we cannot determine a priori how this would affect the figures on specific commodities or trends over time. Suffice to say that, paraphrasing Kevin O’Rourke, pre-industrial international trade was plagued by “the undoubted existence of smuggling.”15

15 O’Rourke (2006).
4.2.2 Re-Estimating Swedish Foreign Trade

The values that were used by the National Board of Trade to estimate Swedish foreign trade were incidentally also used when estimating tariffs. The same problems and possible solutions outlined here therefore apply to the discussion in chapter five on how to measure tariffs, particularly on imports. Therefore, the discussion here on sources, how price series have been used and how export and import series have been calculated also applies to a great extent to the methodology section in chapter five.

The method I have used to estimate new value series is derived from Lennart Schön and Olle Krantz’s work on the Swedish Historical National Accounts (SHNA). They calculated export series, and in a further step production data, by taking quantities exported, as reported in *Historisk Statistik för Sverige 3, Utrikeshandel*, multiplied by price series from Lennart Jörberg (1972) to arrive at exports in current values. I have basically made use of the same method, with certain alterations and specifications. For export prices I have as well turned to Jörberg, but also to Rolf Adamsson (1963), who reports prices on several iron, steel and copper commodities not found in Jörberg. Adamsson’s series begin in 1795, which means that I have had to extrapolate for the years 1780 to 1794. This has been done by using the difference between the price of bar-iron from Jörberg and the commodities included in Adamsson from 1795. For the details of each price series and from where they have been derived, I refer the reader to appendix A. Most quantities have been taken from *Historisk Statistik*, but when certain commodities are not included or when figures for certain years are missing there, I have supplemented with data from the National Board of Trade series on foreign trade and abstracts over foreign trade 1819–1831 made by the Bureau of Customs. Note that no individual quantity of exports and imports, except for the import of grains, is available for the year 1814. Quantities for 1814 have therefore been linearly interpolated.

Imports have been estimated in the same way, but mostly other price series have been used. As far as possible, I have tried to use foreign prices, but in some cases it has been necessary to use Swedish prices from Jörberg. Jörberg makes use of market price scales (*markegångstaxor*), which during this period were based on price data within each Swedish region, with the deputies responsible for these calculations occasionally making adjustments.

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18 These have been digitalized and made available online through Statistics Sweden, SCB: http://www.scb.se/sv_/Hitta-statistik/Historisk-statistik/Sok-historisk-statistik/?Statistikserie=Generaltullstyrelsens+sammandrag+%öv+Sveriges+import+och+export+1819-1831.
so as to reflect “actual prices” in the regions. The largest part of the price series comes from Gregory Clark’s work on English prices between 1209 and 1914. Many agricultural prices are available in Clark’s dataset, as well as exotic imports such as sugar, tobacco, coffee and tea. Certain other prices, for instance for silk, salt, cochenille and indigo, have been collected from Posthumus’ classic work on Dutch prices. These prices have been digitalized and made available online, but most series end in 1813. This means I have had to extrapolate for the years 1814 to 1830. This has been done based on Swedish CPI (see figure 3.3). This is not an ultimate solution, mainly because Swedish average prices may have deviated from the Dutch on commodities that were long-distance goods, but I have seen no other solution in order to create unitary series without any gaps. This has been done with Spanish and Portuguese salt, wine (French), cochenille and indigo (dye-stuff). German wholesale prices have been collected from the work of Jacobs & Richter. Since the German price series begin in 1792, I have connected them to price series from Jörberg and Posthumus from 1780 to 1791. To see exactly which commodities this has affected, I refer to appendix A. Import quantities have then, as with exports, been taken from Historisk Statistik and when necessary supplemented with figures from the National Board of Trade and the Bureau of Customs. Values for re-export have been estimated in the same way. English, German and Dutch prices have been converted to Swedish riksdaler banco using the available currency exchange rates for the period in question.

In total 24 export, 12 re-export, and 35 import commodities are included in the creation of the foreign trade series; exactly which commodities have included can be found in appendix A. This does not encompass each and every commodity that Sweden traded in during this period, but the very large majority is covered. The selection of what commodities to include has been made based on which were the most traded, where exclusions have had to be made where quantities or prices have not been available. The single largest


export commodity that has not been included is potash and the largest group of exports left out is textiles. Together these two made up roughly five percent of total exports between 1780 and 1813, based on the original figures from the National Board of Trade.\textsuperscript{24} Several very small exports such as stone, fur, books, paint, beer and pharmaceuticals have been excluded as well. On the import side, the biggest commodity group not included is pharmaceuticals which made up on average around two percent of total imports between 1780 and 1813. Several smaller foodstuffs, mainly fruit, such as oranges and lemons, and spices, such as ginger, are missing as well, since it has not been possible to find prices or imported quantities for each item. This loss comes up to about 2.5 percent of the total on average between 1780 and 1813. This means that, roughly estimating, on the aggregate between five and ten percent of all exports and imports are not included here.

When trade figures are reported on the aggregate level, I have deflated them using the respective import and export price indexes. These have been calculated based on the price series that have been used to calculate the value of each commodity, noted above. Figure 4.1 shows the trend of these indexes compared to the Swedish CPI, in order to get a sense of how the deflationary technique might affect the aggregate trade figures. Note that that the export and import indexes are weighted using each commodity’s share of total exports and imports as weights.

\textsuperscript{24} Textiles alone made up about two percent of total domestic exports on average between 1814 and 1830, based on material collected, calculated and kindly shared by Professor Lennart Schön, \textit{Serier över svensk utrikeshandel}. 

\textit{Figure 4.1 Three Price Indexes 1780–1830 (1800=100)}

![Figure 4.1 Three Price Indexes 1780–1830 (1800=100)](image_url)

Import and export prices followed each other quite closely during the first 20–25 years of this period, but from 1807 import prices started to deviate quite drastically from both exports and CPI. In just a few years import prices increased twofold, but stabilized after the end of the Napoleonic Wars and even declined during the 1820s. Export prices increased fourfold during the period, as did Swedish consumption prices, but the increase was slower than for import prices and more spread out over the whole period. This is in line with Lennart Schön’s report that Swedish terms of trade deteriorated during the Napoleonic Wars, meaning that import prices rose relative to export prices.²⁵

Note that when the secular trends are reported on commodity-group level they are reported in constant prices (in prices from the year 1800) rather than deflated with the import and export indexes. The observant reader will notice that these values in constant prices add up to more than the aggregate trade figures reported in figure 4.2. The reason for nonetheless using values in constant prices is that this makes it possible to display and compare the size and secular trend of imports and exports on the commodity level.

4.2.3 Trade Figures Measured as FOB or CIF

Another methodological issue is whether export and import values are expressed as fob (Free on board) or as cif (Cost, insurance and freight). Typically exports are denoted as fob, while imports take into account the cost of insurance and freight to denote the value of goods at the country’s own borders. However during the 18th century Swedish trade statistics, most notably in the series of the National Board of Trade, denoted both exports and imports in fob-prices – import values thus did not take into account the cost of insurance and freight. Figures from the National Board of Trade in other words expressed exports, imports and the trade balance in the value they had at the respective outgoing ports.²⁶ The reason that imports did not take into account the cost of freight lay in the fact that, according to Staffan Högberg, freight rates fluctuated heavily, and it was virtually impossible to estimate the cost of freight for each individual commodity.²⁷ The National Board of Trade did report the freight balance, i.e. the difference between what Sweden had earned from outgoing domestic shipping and what had been paid for incoming foreign shipping. Imports on Swedish vessels and exports on foreign vessels were not included. Due to the difficulty of changing freight rates, the freight balance was estimated by taking an approximated freight rate per cargo for each foreign trading partner times the number of cargos in each ship. Figure 4.2 displays this estimated freight balance as reported by the National Board

Positive numbers mean that Sweden earned more on outgoing domestic shipping than what was paid for incoming foreign shipping and negative numbers vice versa. It can be noted that the only times the freight balance was negative was when Sweden was at war with Russia, in 1790 and 1808–1809 (1810 shows a minor deficit as well).

So, there is great difficulty in actually estimating the actual cost of freight and transports for 18th century and early 19th century foreign trade, not to mention the cost of insurance. Hence, there seems to be difficulties in transforming import values from fob into cif.\(^{28}\) One could further argue that in times when trade routes were heavily disrupted, here mostly during the Napoleonic Wars, the cost of freight, transport and insurance would skyrocket. Import values expressed as cif would then not actually measure only the trade in goods as such, but rather be inflated by the cost of freight and insurance. Douglass North showed that ocean freight rates typically rose in time of war, particularly during the Napoleonic Wars when the cost of shipping doubled.\(^{29}\) Olle Krantz found a similar trend for Sweden, where the price index of shipping between 1800 and 1815 was twice that of the 1820-level.\(^{30}\)

\(^{28}\) A possibility would have been to use only Swedish prices of imported goods, but the lack of complete data makes such an exercise implausible.


Evidence from Britain and the United States suggests that the cost of insurance became highly inflated during the Napoleonic Wars, but also during the French Revolutionary War. The risk of having one’s ship captured increased demand for marine insurance as well as increased premiums themselves. At the London Assurance, annual premium income on marine policies peaked to over 216,000 pounds during the height of the war, between 1811 and 1814, but was no more than a tenth of that a decade later. The experience was similar in the US where premiums remained high between 1803 and 1812, but fell sharply once peace was established in 1815.31

When Statistics Sweden (SCB) compiled trade statistics from 1732 to 1970 in Historical Statistics of Sweden, the issue of fob and cif values arose. From that discussion it seems as if expressing imports in cif values did not come into use until 1871, after a proposal had been approved by the King-in-Council saying that imports and exports from then on would be “calculated by the method which so far had only been applied to imports and exports on foreign vessels, that is to say by market price in Sweden.”32 That is the reason why SCB itself measures imports in cif value only from 1871 onwards. Given this and the difficulty in obtaining data and accurately measuring the cost of freight and insurance for the time period in question here, I have chosen to measure imports in fob values, hence the same as for exports. Note that although imports are measured without the cost of freight and insurance, the estimated freight balance as presented in figure 4.2 can be taken into account when the balance of trade is analyzed, as was done in the 18th and early 19th centuries.33

4.3 The Structure of Swedish Foreign Trade 1780–1830

These partly new value series of Swedish foreign trade from 1780 to 1830 will be presented first on the aggregate level, and in figures 4.4 through 4.11 broken down by commodity groups. The categorization of import commodities in figure 4.7 will return in chapter five when tariffs are analyzed using the same division into groups. Aggregate trade figures have been deflated using export and import price indexes, as discussed earlier in this chapter, to account for the inflation of the period.

The first thing that is striking is the trade balance, where an import surplus was present during the most of the period. Only for a few years was there an export surplus: from 1790 to 1796 and 1801–1802. This would be in line with the negative trade balance that concerned Swedish contemporaries. It would also make Heckscher’s conclusion about a positive trade balance as

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32 SCB (1972), pp. 79–80.
33 Högberg (1969), p. 10. See also SCB (1972).
emanating from widespread smuggling on the import side somewhat illusory. Considering the Swedish mercantilist occupation with maintaining an export surplus, it is noteworthy how prevalent the opposite was, quite contrary to the wishes of policymakers.

The single biggest change in the trend occurred during the blockades of the Continental System between 1806 and 1814. Domestic exports completely plummeted, from a high of over nine million riksdaler in 1802 to just slightly over three million at the low point of 1808, a loss of almost a third. This drop is what caused major export interests to criticize the existing tariffs on exports and to start arguing for a change of policy, as we will see in chapter five. Imports instead soared to record levels during these years, with particular highpoints in 1809, 1810 and 1813 of 23, 26 and 22 million riksdaler respectively. Roughly between one-third and one-fourth of the increase in imports was made up of exotic goods such as coffee, tobacco and sugar, but also wine and spirits. Quite a substantial part of these goods were aimed for direct re-export, which would explain why re-exports increased so markedly during these years. The origin of this unusual increase has not been exactly established, but Heckscher’s hypothesis that it was English exports of exotic foodstuffs to Sweden meant for direct re-export to the European continent to circumvent Napoleon’s blockades must be seen as likely. According to Heckscher, first and foremost Gothenburg became an important Swedish passage for British and colonial goods on their way to the European continent.

past the French blockade.\textsuperscript{35} Leos Müller has added that neutral American ships carrying colonial and American goods could use Gothenburg as a loophole in the Continental System.\textsuperscript{36} However, there was a remaining import increase that was not intended for re-export. This should have meant a higher degree of import penetration for exotic goods during these years.

In the 1820s domestic exports slowly gained back some of what was lost during the Continental System and fluctuated between five and six million riksdaler per year, but did not return to the highpoints of the early 1790s. Imports were, on the other hand, generally higher during the 1820s than they were during the 1790s, but not as high as during the 1780s. European demand for Swedish re-exports heavily decreased once the mutual blockades between France and England were removed in 1814, and while a few commodities continued to be re-exported, the total value of these were generally quite low. Despite the minor surge of domestic exports and the decline of imports, the trade balance continued to be negative during the 1820s, with differences being larger during the second half of the decade as imports increased to around ten million riksdaler, while exports remained rather constant.

The Swedish loss of Finland in 1809 also affected foreign trade somewhat. Finland after all did make up about one third of the total area of the kingdom and about one fourth of its population. Data on Finnish foreign trade before the country was ceded to Russia is available for a few key goods between 1780 and 1808. If 1808 is filtered away due to insufficient data, then it can be shown that the loss of Finland probably had little impact on the general development of Swedish foreign trade, but had quite a large impact on the development of a few specific goods. Finland for instance generated about 24 percent of all tar exports and 13 percent of all pitch exports from Sweden-Finland between 1780 and 1807. It furthermore was responsible for close to 16 percent of all forestry exports on average during this period. In the case of imports, Finland accounted for only four percent of all grain imports on average, while it imported slightly over 14 percent of all salt on average.\textsuperscript{37} Unless the loss of Finnish territory was leveled out by production increases in Sweden proper, there should thus have been some differences in the export of tar, pitch and forestry commodities after 1808–1809.

How do these partly new value series differ from the original series of the National Board of Trade? The trends are generally the same, but the import side has in most parts higher levels in the series developed here, which was to be expected since foreign market prices have been used instead of unchanging unit values. The difference between the two series becomes especially marked during those years of the Continental System when imports soared. This would indicate that the original series from the National Board of Trade heavily

\textsuperscript{35} Heckscher (1949), p. 659.
\textsuperscript{37} Data on goods of minor importance is not available. See SCB (1972).
underestimated the import levels, which is probably why Heckscher in his work found a positive trade balance, while contemporaries were inclined to assume that there was a negative trade balance. The export levels shown in the series here and those of the National Board of Trade are more similar. Based on the findings of Vallerö explained in section 4.2, this would be logical since the export prices were more easily obtained and so values for exports were all in all closer to the market prices for exported goods, compared to the probable big difference on the import side.

Series on imports and exports at the aggregate level from 1800 are also available in Swedish Historical National Accounts (SHNA) and in the work of Rodney Edvinsson on macro-economic data for Sweden. While I have employed the same method in estimating the series as Lennart Schön and Olle Krantz did for exports in SHNA (for imports the method is not specified or described), the Edvinsson’s method differs somewhat. Edvinsson has extrapolated both exports and imports back to 1800 from 1871, based on data from Östen Johansson from 1871 to 1950. Export series have been extrapolated using series on exports from SHNA and imports have been extrapolated using unpublished material from Lennart Schön.38 Edvinsson provides no further specification or methodology, but asserts that extrapolating backwards should not significantly distort the results.39 These series differ from mine in a few ways. First, both SHNA and Edvinsson report imports in cif-prices and both imports and exports in SEK rather than riksdaler. Second, in terms of results the biggest difference is that both these series show a positive trade balance for most of 1800 to 1830, while I report a negative trade balance almost throughout the period. Third, Edvinsson’s import series show a similar spike during the Continental System as the import series presented here. This trend is, however, much less pronounced in the SHNA series. A fourth difference is that both SHNA and Edvinsson used figures on foreign trade for the purpose of constructing national accounts, and not primarily for analyzing trade.

I would argue that the benefits of the series used here are multiple. First, I provide a clear methodology and sources to estimate trade figures. Second, particularly imports are re-evaluated based on the foreign market prices of the time. Third, while I have only a sample of both exports and imports, about 90-95 percent of the total, I have built the aggregate export and import figures commodity by commodity, which should promote accuracy. Fourth, the results here are consistent with earlier findings regarding the impact of the Napoleonic Wars and the blockades, particularly Heckscher’s argument that British trade was re-directed via Swedish ports – which would explain soaring import figures between 1807 and 1814.

Export levels are generally quite similar when comparing the different series, while imports differ more, which would be in keeping with Vallerö’s

point on the difficulty in correctly estimating import levels for this period. For a comparison between all the series discussed above, I refer the reader to appendix B.

4.3.1 The Structure of Swedish Exports 1780–1830

Figures 4.4 and 4.5 mostly tell the story about the dominance of iron and steel for Swedish exports in the pre-industrial era. These made up around 60 percent of total domestic exports before 1816 and increased even up to around 80 percent on average during the 1820s. The single most important commodity was of course bar iron, whose story has been told in numerous academic works. Bar iron by itself made up over 75 percent of total domestic exports during the 1820s, and together with the second single largest export commodity, wooden battens (also including boards and deals)\(^{40}\), the export concentration was over 80 percent after 1816. The dependency on these two main exports increased as the period progressed. The importance of alum as an export also increased slightly towards the end of the period, but it was all in all quite a small export in real numbers.

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\(^{40}\) Statistics Sweden makes linguistic differentiations between deals and planks (helbotten-bräder and plankor) and battens (halvbotten-bräder) and boards (enkla bräder). From here on I use them as one category named “battens”.

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Figure 4.4 Exports by Commodity Group as Fraction of Total 1780–1830

![Figure 4.4](image-url)
The further rise of the importance of iron and steel after the Napoleonic Wars, after the slump during the war, was partly due to an increase in that category in itself, but also coincided with a huge drop in fishery exports after 1807, as can be seen in figure 4.5. Herring and train oil from fish had been large exports before 1807, making up on average over 20 percent of the total, but were virtually wiped out during the 1810s and 1820s as particularly conditions for fishing herring outside the Swedish west coast worsened. In April of 1808 a decree was sent out that all export of herring should cease due to the “current high price” and the “domestic need of this necessary good.”

Forestry exports such as battens and timber gained some ground over the period, but were somewhat hampered by increasing competition from Canadian wood on the British market after 1810. Battens were exported in larger quantities after 1815 than before, an increase of roughly one sixth of pre-war levels. Exports which had seen booms during times of war experienced hardship once peace was established in Europe in 1815. As can be seen in figure 4.6, pitch and tar dropped sharply after 1808 and were at especially low levels in the 1820s, when the need for ship construction declined and Swedish exports were no longer benefitted by the state of war, as argued by Högberg. It is also highly possible that the big drop in pitch and tar after 1808 was affected by the Swedish loss of Finland, as indicated earlier. Grains were exported in large quantities during

41 Kong placater, 1808, april 1.
43 Ibid., p. 146.
years of good harvests, which was increasingly the case during the 1820s. In peak years such as 1809 and 1810 a large part was probably made up by direct re-exports of foreign grain. Exports of brass and copper generally decreased slightly after 1815, but not as drastically as for fishery products and pitch and tar. Most of all the export levels of copper and brass fluctuated quite heavily from year to year.

4.3.2 The Structure of Swedish Imports 1780–1830

Swedish imports are easily summarized in four major categories which made up over 90 percent of total imports during this period: alcohol, exotic consumables, textiles and agricultural commodities. The generic category “other” in figure 4.7 consists of commodities such as pit coal, linseed oil, herring and train oil. Its increase during the 1820s has mainly to do with the fact that the supply of herring and train oil suffered a crisis (as mentioned above) and could no longer fully supply domestic demand, so the need to import these two commodities increased during the 1820s. Common exports in metals and forestry were generally not imported at all, even though lead was imported in small quantities throughout the period and tar (likely from Finland) became an import of smaller significance during the 1820s. It should be noted that if oak and unprocessed wood had been included in forestry (but they are not due to
lacking data), that category would have been slightly higher, but would probably not have made any significant differences to the proportions in figure 4.7. Alcohol usually made up a few percent of total imports – generally between five and ten percent during the first half of the period. This decreased during the 1820s to only about one to five percent.

“Exotic” imports are commodities such as raw sugar, raw tobacco (and smaller quantities of refined tobacco and refined sugar), coffee, tea, pepper and raisins. This was the single largest import category throughout the period, where a particular peak occurred between 1807 and 1815. This peak was made up largely by a huge increase in sugar imports, but also imports of coffee and tobacco peaked during these years, as can be seen in figure 4.8, where these three commodities have been singled out. As mentioned earlier this was probably because coffee, sugar and tobacco were partly imported to be re-exported to the European continent. These three commodities then became increasingly common during the 1820s, where especially tobacco was imported in increasing quantities compared to pre-1800 levels. A big commodity in this category was also salt, which was one of Sweden’s single most significant imports, as it was used for food preservation and as a spice, for which domestic substitution and supply was low or non-existent during this period. Unlike sugar, coffee and tobacco, salt imports decreased quite significantly after 1816.

Source: Statistiska centralbyrån (1972); KmkA, årsh. utrikes handel, ser. 3, RA; Generaltullstyrelsen 1819–1830; Jacobs & Richter (1935); Posthumus (1946); Adamson (1963); Jörberg (1972); Clark (2004).
Agricultural imports were very significant during the first half of the period (see figure 4.9), when Sweden was particularly dependent on grain imports when domestic harvests were poor. This dependency decreased quite significantly in the 1820s as harvests improved and domestic output increased (to be discussed further in chapter five). The decrease is noticeable in all cereals, but perhaps most so in those that had been most significant imports during the 18th century, rye and wheat. Certain years during the 1820s there was hardly any import of these two goods at all. Livestock and dairy (butter and cheese) were also imported in smaller quantities. Cheese was a larger import during the 1780s and 1790s, while butter on the other hand became more important during the 1820s. Meats (beef and pork mostly) and tallow were brought in in smaller quantities, and the import of tallow was almost twice as large after 1815 compared to before.

Textiles made up on average close to 20 percent of total imports during the period. These imports almost exclusively made up by raw materials such as wool, cotton, hemp, flax and silk, while (mostly sole) leather and cloth were also imported in some significant quantities. The import of wool and silk was quite consistent over the period. Cotton imports were higher after 1815; if one filters away the extreme highpoint between 1809 and 1811, when cotton was imported also to be directly re-exported, imports were almost twice as high after 1815 than before. Hemp and particularly flax decreased significantly during the same period, where the import of flax after 1815 is only about one-
third of what it had been earlier. A small part of this decrease had to do with lower levels of direct re-exports of flax, but mostly the import for domestic use decreased. All these raw materials were mostly meant to be used in domestic manufacturers producing clothes, linen and processed textiles.

The single largest alcohol import was wine, even though port wine and small quantities of beer were also imported. Spirits such as rum, brandy and cognac were also brought into the country in moderate quantities, which decreased quite substantially in the 1820s. What increased between 1809 and 1814 was especially wine and rum directed for re-export to the European continent, in a similar manner as the exotic consumables presented earlier. The import of herring increased substantially after 1818, as is evident in figure 4.10 under the category “other”. Imports of train oil also increased during the 1820s, albeit not reaching any higher levels. Pit coal was brought into the country in higher quantities during the 1780s and 1790s and decreased by more than half after 1820 compared to earlier levels. Metals consist here of only unprocessed lead and tin and was imported in low levels except for in 1813 when tin levels spike temporarily.
4.3.3 The Structure of Swedish Re-exports 1780–1830

As could be seen in figure 4.3 Swedish re-exports were generally quite low, particularly after 1782 and before 1807 when they averaged only four percent of domestic exports. Few commodities were consistent re-exports throughout the period; it is only salt that was re-exported in significant numbers each year – an indication of its good supply. Tobacco was occasionally re-exported in large quantities, for instance during the 1820s, which might explain part of its increasing import levels. Coffee in particular and sugar to a smaller extent were re-exported during the Continental System. Coffee continued to be a re-export of some significance during the 1820s. During the 1820s about 2 percent of all imported sugar, 8 percent of all imported coffee, and 11 percent of all imported tobacco were re-exported. As a comparison, about 27 percent of all imported salt was directly re-exported during the same period.

Textiles (flax, hemp, cotton, and indigo dye mostly) were re-exported in significant quantities only in certain years, especially during the early 1800s and during the Continental System. Tea and other goods (such as porcelain/chinaware, and to a smaller degree spices and textiles) traded by the Swedish East India Company were dominant during the 1780s and 1790s, but naturally lost their position as big re-exports as the Company was dismantled from 1812 and onwards. Leos Müller has estimated that most imported tea into Sweden...
was re-exported without being taxed – no more than ten percent of total import volumes entered the country for domestic consumption.\footnote{Müller, L. (2003). The Swedish East India Trade and International Markets: Re-exports of Teas, 1731–1813. \textit{Scandinavian Economic History Review} 51, 28–44, p. 35.}

4.4 Summary

This chapter has presented partially new series on Swedish foreign trade between 1780 and 1830. This has been done based on Rolf Vallerö’s findings that the original series from the National Board of Trade (used for instance by Heckscher) had unreliable estimates on import levels, while figures on exports were more reliable. The findings here have been compared with the original series, as well as those used in the national accounts series by Schön and Krantz and Edvinsson. They seem to further confirm Vallerö – the greatest uncertainties still lie in the import series, which diverge the most between the four different estimates. Export figures are more closely aligned, indicating that they are more easily estimated than import figures.

In terms of actual results the biggest differences shown in the series presented here are two. First, there was an import surplus for the majority of the period. This differs from all the other earlier findings, by Heckscher, Schön and Krantz, and Edvinsson, as they show rather an export surplus for most
years. The result is, however, consistent with contemporaries’ concern over an existing negative trade balance, as reported by Heckscher. Second, import figures are shown to have been higher during the boom years of the Continental System during the Napoleonic Wars in the series here. This unusual peak is consistent with Heckscher’s conclusion that it likely was due to an increasing influx of British colonial goods to be re-exported to continental Europe to circumvent the blockades. He described the “overflow of goods” (mostly in Gothenburg’s ports) after 1807 as “without the least doubt the most colorful during the entire long period 1720–1815” and the changed which occurred as “obviously a course without any precedent in the past.”

As shown in chapter two, the Napoleonic Wars and the blockades between England and France had an adverse impact on trade, and they affected Swedish foreign trade in a similar manner. Traditional domestic exports fell after 1807, while imports and re-exports soared to record heights. The temporary influx of exotic imports such as coffee, sugar and tobacco between 1807 and 1814 continued after the war was over. The structure of imports then shifted as these goods increased their share of total imports compared to pre-war trends, and “goods of necessity” such as grains and salt decreased in absolute levels and share of total imports. Any longer comparisons with the findings of Staffan Högberg are made more difficult by this fact, as he ended his series in 1808 and only included traditionally large imports such as grains and salt and more or less disregarded exotic imports such as coffee, sugar and tobacco, and spirits and wine.

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CHAPTER 5
Tariff Structure in Sweden 1783–1830

Overall mercantilist, with highly protectionist tariffs, is usually how Swedish trade policy has been described as being around the turn of the 18th century. Little, however, has been said or analyzed about the structure of tariffs and the possible tension between protectionist and fiscal motives behind it. This chapter aims to fill that gap. It will start out with a brief introduction to the main foundations of Swedish trade and tariff-policy: from where do the policies of 1780 to 1830 stem?

5.1 Background – Swedish Tariffs and Trade Policy during the 18th Century

The very beginning of the 18th century saw a breakthrough for protectionism in Swedish trade and tariff policy. Carl Danielsson has described how the tariff revisions of 1715 and 1718 meant a significant change from the recent past. Tariffs were raised almost across the board on imports and exports, and the author points especially to the export tariffs on copper and bar iron as a major change. The duty on the latter was raised from 10 percent to 25 percent. This would later come under heavy criticism leading to lowered tariffs again. According to Danielsson, the rates were increased both for fiscal and protectionist motives. Lili-Annè Aldman notes that after a brief period of lower tariff rates and more liberal policies during the 1720s, duties were again raised during the 1730s. The general aim of the new economic policy was to make Sweden self-sufficient. Sven Gerentz in turn views the year 1726 as an important demarcation line for Swedish economic-political history. He writes that it meant that “the moderate period was over and a new wave of protectionism would come to spread out.” Certain key domestic interests would now receive protection from foreign competition. Particularly selected was the textile manufacture sector, but refinery of sugar and tobacco also won

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1 For instance in Ohlin (1962); Heckscher (1949); Gerentz (1951).
support. Protection for domestic manufacturers was not the lawmakers’ sole concern behind increased protectionism through raised tariffs and broadened import bans; ensuring sufficient capital stocks for manufacturers and a concern over an existing import surplus were key ingredients as well.\(^5\) The protection of textile manufacturing went into effect from 1735 and was partially expanded through the beginning of the 1740s. In April 1742 it was made illegal to trade in and to wear foreign clothing, to “definitely prevent competition with the domestic manufacture products.”\(^6\) The protectionist system remained in effect throughout the Age of Liberty and the 1770s with only minor changes.

An important part of this system was the Abundance Ordinance, överflödsförordningen, which came in different versions throughout the 18th century. The ordinance was filled with import bans meant to stem excessive use of foreign goods which were not seen as “goods of necessity”. The list of banned imports could span over several hundreds of commodities, of which textiles, such as silk, were usually the most plentiful. From the middle of the 1730s spun tobacco and tobacco stems were also included in order to further domestic manufacturers. The Ordinance of 1766 was expanded to include among others things coffee, chocolate, and certain types of liqueurs and wines. Because of the separation made between “necessary” and “luxury” goods, the exhortation of the state to its subjects has been interpreted in moral terms. Sven Gerentz, however, argues that the motives of the National Board of Trade, the main government authority involved, were based purely on industrial policy rather than morals. He for instance points to events during the 1790s where, after it became known that foreign textiles and fabrics were spread to the public in great quantities, probably through smuggling, the Board reasoned in terms of the importance of future outlets and increased sales for domestic producers, rather than made moral objections to the matter.\(^7\)

It should be mentioned briefly that certain domestic interests received other types of state support than tariffs and plentiful import bans. Exporters of herring were for instance granted production premiums between 1752 and 1774, which according to Högberg could be rather large in size relative to the price of herring.\(^8\) The output and export of bar iron was partly capped by a quantitative restriction between 1748 and 1803, mostly in order to keep the price of the commodity up.\(^9\)

The 1720s should also be regarded as a milestone decade for Swedish protectionism of its shipping and mercantile fleet. In 1724 the Swedish Navigation Act went into effect, and it would come to influence Swedish trade

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\(^7\) Ibid, p. 253.
and shipping for the remainder of the century and well into the next. It did not start to be dismantled until the 1820’s, partly as a result of outside pressure through the signing of bilateral trade agreements. The act was meant to support the expansion of the domestic naval fleet to the detriment of the foreign, hence resembling the British Navigation Act from 1660 in its aim. Import on foreign vessels was practically banned unless the goods were produced in the carriers’ native country or in its colonies. In practice this meant that British as well as Dutch re-export of Southern European salt and grains from the Baltic States to Sweden was stopped. Exports were also to be shipped out on domestic vessels, and even though there was no official ban for foreign ships to carry Swedish exports, this was effectively made more costly through the act, since foreign ships would somehow have to cover the cost of the trip to Sweden without a guarantee of being able to bring goods there. An extension of the Navigation Act which further promoted domestic shipping came in the form of tariffs. This meant that foreign ships were to pay a 50 per cent higher duty than Swedish ships, both for exports and imports. The foreign duties were called “unfree”, while the domestic were termed “free”, to further accentuate the difference between them. This system was fully enacted in the tariff revision of 1739. Later the system would mean different rates for different goods. In 1782 the export of battens had a tariff that was 280 per cent higher on foreign vessels, while the equivalent difference for bar iron was around 50 per cent. The export of herring on the other hand was not differentiated at all, but enjoyed the same tariff costs regardless of the vessels’ origin.\(^\text{10}\)

5.2 The Political Control over Tariffs

In this section I aim to make clear the setting of tariffs between 1782 and 1830. Central will be how the political and bureaucratic system around the decision-making process for tariffs was organized during this period.

There is reason to suspect that the Swedish public administration of tariffs underwent a significant change in 1809 with the adoption of a new constitution. Several previous authors have pointed out that the political power and control over the policy-making of tariffs went from being a “regal right”, in Nils Herlitz’s wording, during the Gustavian Era to a situation where trade policy after 1809 became a source of tension between the government (the king and his ministers and advisors) and the Diet of the four estates.\(^\text{11}\)

While the setting of tariffs indeed was in the hands of the king and the government during the 1780s and 1790s, a substantial part of the practical work was carried out by committees. The king appointed the committees, usually chose its members and provided the guidelines for what they were supposed

\(^{10}\) Högberg (1969), pp. 28–30.

to do. Accordingly, the majority in the committees on tariff revision before 1809 consisted of ministers and central figures from public administration. Members could also be brought in from outside the cabinet, particularly if they had previous experience from public administration. During these two decades two wholesalers were members of the committee, while the remaining seven came from the kings’ inner circles. Certain key political figures at the time were included in all three of the tariff-committees between 1782 and 1809. One such was Johan Liljecrantz, who first held the position of minister of finance, and later became head of the Board of Trade.

In both the revisions of 1782 and 1799, the process of deciding the level and structure of tariffs was quite long. Both times it took a bit more than a year between the time the king appointed the committee and when he could approve of the committee’s proposal. The king had the right to make changes to the proposal before giving his final approval. In 1782 Gustav III wanted to make eight changes to the import tariffs; it has been suggested that they were all “minor adjustments”.¹² He however chose to accept the export tariffs without revisions. Communication between the committees and the king were also ongoing throughout the entire process.

It should be noted that it was not uncommon at the time that the preparation and deciding of political issues was handed over to committees appointed by the king. Both Gustav III and Gustav IV used directly appointed and controlled committees quite extensively during their reigns. According to Hesslén, it was for the former a way of securing his own political power and keeping the opposition at bay.¹³ Before 1772 these kinds of committees had been appointed and directed by the parliamentary Diet, but during the Gustavian Era this power was completely moved to the government’s hands. It seems like no single committee whatsoever was proposed or initiated by the Diet between 1772 and 1808.¹⁴ This way of dealing with political issues and problems was, even though generally in use, particularly common within the fields of defense policy and industrial policy. Moreover, it was common that the committees within these areas had the same organization and ways of working throughout the Gustavian period. Hesslén has stated that most of these committees, such as the ones dealing with tariffs, were “expert-committees”, meaning that the members were included on the basis of their knowledge and expertise.¹⁵

We can summarize how the Swedish decision-making process regarding tariffs worked between 1782 and 1809 in a small flow-chart based on what has been described in the preceding paragraphs.

¹⁴ Ibid, p. 80.
¹⁵ The Swedish wording “sakkunnig” here is more modest than the English equivalent ”expert”. Hesslén, (1927), p. 92.
Things were about to change with the adoption of the new constitution in 1809 (see also chapter three). It would set out the ground rules for how trade policy would be decided during the 19th century. After the latest revision of tariffs in 1799, it would take until 1816 until they were fully under scrutiny again. The king had appointed a committee already in 1812 to oversee the tariffs, after a proposal from the Diet. The proposals stemming from there had, however, consisted of only minor changes to the tariffs, which caused the Diet to bring up the issue again in 1815. King Karl XIII was urged to decide upon the issue after hearing with the committee as well as “the others concerned”.16

The proposals from the committee, which also included import and export bans, were discussed in late March 1816. The import tariffs were approved by the king after certain changes on the 20th of March, while the export tariffs were discussed and approved with one “minor change” on the 28th.17

This committee consisted of no less than 24 individuals in total, even though not all were present at all meetings or sessions. The chairman was Olof Elias Lagerheim, who had also sat on the two major tariff committees

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16 Montgomery (1921b), p. 6.
during the Gustavian Era. Several ministers as well as high ranking public officials were appointed. In total seven wholesalers and two representatives from the textile industry were included in the committee.\(^\text{18}\) The composition hence greatly resembled the committees of the Gustavian Era, with a mix of cabinet members, representatives from the relevant administration, as well as wholesalers. The inclusion of people outside of the public administration was done on the basis of wanting “experienced traders”. Out of the seven wholesalers, three were members of the Diet at the time. According to Hesslén, it was only one out of these seven who was brought in on “political” merits rather than as an expert or holder of practical knowledge from the trade as a wholesaler.\(^\text{19}\)

The Diet could ask the king to set in motion investigations of certain issues, such as tariffs. This was a marked difference with the practice of the Gustavian Era, when that possibility lay completely with the king. However, even after 1809 the king’s power was great in these matters, as he had the right to reject any request for an investigation, as well as to decide whether a committee would be created, and who would be appointed to it. The beginning of this period also saw the king reject several requests for inquiries into political matters from Diet, which was thus left without any measures being taken, although this practice became all the more rare as the 19\(^{\text{th}}\) century progressed.\(^\text{20}\)

When the question of the export tariffs came up in 1818 and 1822, it seems as though no committee was involved in the process. Here the process was initiated when the standing committee on appropriations in the Diet, consisting of 48 members, raised concerns about the restrictions on the export of forestry goods. The opinions of the standing committee (not to be confused with the tariff committees) later won the full support of the whole Diet, which requested that the king in his turn assign the issue to the Board of Customs and “other expertise” to revise the tariffs.\(^\text{21}\) The king and the board took some of the complaints from the Diet to heart, but revised the proposal based on what they thought was fitting. This was probably the biggest direct influence the Diet had had on tariff policy since the Age of Liberty.

The next major adjustment of both import and export duties would come about in 1824. Also this time the task of fully revising and drawing up a trade policy program was handed over to a committee. This commission was significantly smaller than its predecessors, as it consisted of only four members (ministers and public officials) in total. The Diet’s standing committee on appropriations discussed the proposal from the tariff committee, and presented its own revised version of it to the Diet for approval or rejection. The majority of the Diet accepted the proposal, but the Burgher Estate did not. The king

\(^{18}\) Ibid, p. 48.

\(^{19}\) Hesslén (1927), p. 172.

\(^{20}\) Ibid., pp. 154–156.

\(^{21}\) Montgomery (1921b), pp. 11–12.
and his cabinet were then notified of the outcome. A key issue here was that both the tariff committee and the standing committee on appropriation had suggested the removal of several of the import bans that had existed for several decades in Swedish trade policy. The government did not, however, go as far as the original proposals had desired. According to Montgomery, this had to do with the fact that several actors within industry and manufacturing had petitioned the government that the bans should be retained. As earlier, the whole process from the committee’s preparation of the issue to the approval of the king took approximately 1–1.5 years.

The same proposal was also up for revision in 1826, which means that there was no new committee appointed or no “ordinary” preparation undertaken regarding the issue. It can be noted that the suggestions of the tariff committee

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now were recognized to a much greater extent than in 1824. Several export and import bans were removed, even though their “significance was not proportional to their quantity.”

After this brief chronological, narrative we can summarize how tariffs were set from 1809 to 1830. Note that the first step, the Diet calling for investigation or for the question to be raised, is not a necessary step, in the sense that it was required by the constitution for tariff revision to take place, but it was a step that occurred in practice as shown in the text.

To summarize, there was a certain consistency in how tariff committees were composed during the whole period, with a mix of ministers, public officials and “outsider experts”. Certain prominent figures also recurred on these committees. The biggest difference after 1809 compared to the Gustavian Era concerned the role of the Diet. Whereas the rights of setting tariffs during the earlier period lay completely with the king and his cabinet, after 1809 the Diet could call for investigation and the formation of a tariff-committee, debate the proposals in the standing committee on appropriation, and voice its concerns in ordinary parliamentary sessions.

5.3 Estimating Swedish Tariffs

Here I will discuss important points regarding which tariffs have been included or excluded and why I have chosen to measure tariffs ad valorem and not weight them by trade levels or anything else. A briefer explanation on the sources from which tariffs and prices have been collected will also be provided.

5.3.1 Which Tariffs Are Included

Major revisions of the tariffs were undertaken in 1782, 1794 (for imports only), 1799, 1816, 1818 (exports only), 1822 (exports only), 1824, and 1826, which will hence be the main points of reference here. All changes in tariffs took effect on January 1st the succeeding year, meaning that tariffs adjusted in 1782 applied as from January 1st 1783 and so on for each major revision. Note that for some commodities, especially the import of grains, changes were made more often, occasionally with mere months in between. With grains this was oftentimes done in order to adjust for shortages or abundances in supply in the realm depending on how the harvests fell out. I have taken these shorter fluctuations into account by including every revision of the grain tariffs (wheat, rye, oats, barley, malt, and peas) and have calculated yearly averages where revisions were made several times per year. This will not be as accurate as

23 Ibid, p. 22.
as month-to-month data would have been, but it will at least take into account yearly fluctuations that data based only on the major revisions would have hidden.

As for choosing which commodities to include in the analysis, I have followed two main principles: (1) what commodities were the main exports and imports, based on the trade statistics presented in the previous chapter; (2) what commodities could be important to analyze from a possible protectionist angle. Iron and steel were for instance very small imports for Sweden, as these were major exported goods, as shown in the previous chapter, and were explicitly protected in the new tariff code of 1782.\footnote{Gerentz (1951), p. 252.} The first principle has been applied to its full extent when it comes to export tariffs, while for import tariffs the second principle has also been taken into account. Certain limitations in available data have restricted the basis for inclusion. For certain larger import commodities, price data have been completely missing or been so scarce that they had to be excluded. This has especially been the case with prunes. This is also the reason why the export tariff on potash is not included. In the case of imports of woven fabrics and cloth, it has been nearly impossible to make sense of how they have been categorized in the tariffs lists, and so that type of commodity has been excluded on the basis of the difficulty of matching the price per type of cloth with the corresponding tariff per cloth. Other than these, all of the major commodities that are included in the trade statistics are also included in the tariff analysis in this chapter. All in all tariffs on 16 export commodities and 53 import commodities have been considered.

Up until 1810 Sweden made use of tariffs for trade by land across the borders with Norway and Russia. These were usually set lower than tariffs for trade by sea, and naturally applied to a much lower number of commodities. These land tariffs have been completely omitted here, since the very vast majority of foreign trade was conducted by shipping and not by land. Hence, the tariffs spoken of here strictly refer to those on trade by sea, \textit{stora sjötullen}.

\subsection*{5.3.2 How Tariffs Are Measured}

As has been already mentioned, tariffs in this chapter will be measured as \textit{ad valorem}, which means they are related to a value or price of a commodity. This will present the tariff as a percentage of the price of the commodity. It is usually preferable to using the alternative, which is specific duties on each individual commodity without connecting them to the commodity price, for instance 31 riksdaler banco per each cask of rum as was the case in 1782. Showing tariffs as a percentage has several advantages: (1) lacking a good unitary quantitative measurement, specific tariffs cannot be used to create groups of commodities or even give average import or export tariffs, which would greatly limit the possibility of analyzing tariff structure, as is possible...
to do with the ad valorem method; (2) calculating tariffs as a percentage means it is possible to compare levels between different commodities, as well as between countries, which is made much harder when being restricted by quantitative measurements which are not translatable or transferable between commodities and countries; (3) comparisons, changes and analyses over time are made more easily for the same reason.

The official source (see below) from which the tariffs have been collected used a mixed system for displaying the tariffs. The most common was that a duty was specified according to a quantitative measurement (weight, liquid, length, etc.) as well as related to a commodity value. This value was supposed to be read as “estimated market price”. Just as with the trade statistics, one could also call this price a “unit value”. Occasionally a pure ad valorem measurement was used, not related to any quantitative measurement at all, where the tariff could be stated as part of the value of 100 riksdaler. With commodities that were banned from import, the tariff was usually set at 50 or 55 riksdaler to the value of 100.

This mixed system presents researchers with both possibilities and problems. First, the same way of calculating ad valorem tariffs cannot be applied to each individual commodity, since the pure ad valorem tariffs in the original source, where a percentage is given, need to be taken into account. Therefore I have chosen to stick to the original measurement and not make any additional calculations when an ad valorem tariff is already given. This was for instance the case with the import of all iron and steel. Second, since each specific tariff is related to an estimated market price of the commodity, it would be possible to create ad valorem measurements from the original source. However, the same problem arises here as with the trade statistics in chapter four – the estimated price or unit value was often, if not always, underestimated, and before 1807 unchanging, particularly for imports. It actually turns out that the exact same unit values were used to calculate the tariff rates as were used to calculate import levels in the trade statistics. This would usually lead to tariffs being estimated as higher than they really were, since they were related to a lower price than the actual import market price. Therefore I have created new ad valorem measurements using the export and import prices from chapter four, instead of using the original values. One could call this “ad valorem equivalents”, as for instance Markus Lampe and his collaborators did when researching Danish agricultural tariffs during the 19th century using the same method. Third, the use of these ad valorem equivalents will mean that tariffs might change not only as a result of revised policy, but also as a result of changing market prices. As we will see below, particularly the heavy inflation...

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26 This method was also preferred by Bohlin in his research on Swedish tariffs 1885–1914. See Bohlin (2005), p. 12.

during the Napoleonic Wars had a distinct effect on the trend and level of Swedish tariffs.

The ad valorem tariff is much used and preferred in the literature on trade policy and international trade. It should, however, be noted that there are alternate ways of measuring tariffs that have been used. Forrest Capie conducted a larger survey of American, British and Canadian duties between the late 18th and late 20th century and instead used a measurement of average import duties, calculated as customs revenue divided by net imports.\(^{28}\) This was also the operationalization favored by John Nye in his comparison between English and French commercial policies during the 19th century, which sparked some debate with Douglas Irwin over both actual content as well as research methodology.\(^{29}\) This measurement has, however, been criticized since it “does not distinguish between revenue and protective tariffs, and is subject to severe index number problems.”\(^{30}\) Douglas Irwin has in similar veins argued that this kind of data does not give any information about nominal or effective rates of protection across sectors. It is rather an equivalent to measures of an economy’s “openness”, similar to measurements such as the rates of exports and imports to GDP.\(^{31}\) One could add that the average import duty would not take into account goods that were not imported at all, as well as fail to measure tariffs on individual commodities where detailed customs revenue data is missing. Such an average measurement would also fail to take into account if the composition of imports should change over time, which is particularly important if protected goods’ share of imports fall steeply when tariffs are increased.\(^{32}\)

Perhaps a more pressing issue is whether ad valorem tariffs should be weighted when analyzing average import tariffs or tariffs by commodity groups. The most widely used is the trade-weighted tariff, which uses import levels as a share of the total as weights. One can also imagine domestic consumption on the commodity level being used as a weight. Weights are used since the unweighted (or “simple”) average tariff rate has certain “obvious disadvantages” when measuring the restrictiveness of a country’s trade policy. Most importantly, it treats all commodities as equally important and is sensitive to how commodities are classified in the tariff code (tariff lists).\(^{33}\) However, in a series of publications James Anderson and Peter Neary have shown that most weights entail serious problems of their own. Trade levels as weights have the huge disadvantage that high tariffs might get a lower weight in the

\(^{28}\) Capie (1994), pp. 31–32.

\(^{29}\) Nye, (1991). See also the discussion in chapter 1.


\(^{31}\) Irwin, (1993). See also the discussion in chapter 1.

\(^{32}\) See for instance Bohlin (2005), p. 23.

\(^{33}\) Anderson and Neary (2005), p. 8.
average tariff rate. This is because high tariffs restrict trade so much that the trade-weight becomes so low as to skew the importance of high tariffs. There is hence a severe downward bias with the trade-weighted tariff, especially when nominal tariffs are increased over time.\textsuperscript{34} A further problem is that high tariffs on commodities with virtually zero import could have been important from a protectionist point of view, something that the trade-weighted average tariff would completely miss. One could use domestic production as a weight, but that would give zero weights to noncompeting imports with no domestic substitution, such as coffee and wine. Consumption-weights have the same disadvantage as trade-weights; they would assign very low importance to commodities with high tariffs since they distort trade, and hence consumption, to such a high degree.\textsuperscript{35} One could add that when data on domestic production and consumption is scarce, these types of weights become implausible.\textsuperscript{36}

Anderson and Neary have instead launched their own Trade Restrictiveness Index (TRI) as way to solve these types of measurement issues. While TRI has been praised for its theoretical soundness, Kevin O’Rourke has shown that it should be used with some caution as it is sensitive to what statistical specifications are used in the model. O’Rourke arrived at very different results depending on how the elasticity of domestic substitutions of certain imports was specified.\textsuperscript{37} Given this statistical sensitivity and the fact that TRI was designed first and foremost as a tool for testing the welfare effects of tariffs on the overall economy, I have decided not make use of it. Since I will be interested in testing the relationship between tariffs and trade levels in chapter six, Anderson and Neary’s proposed Mercantilist Trade Restrictiveness Index (MTRI) could be of better use since its main concern is trade levels rather than welfare.\textsuperscript{38} However, I have also decided to opt out of that option due to uncertainties about statistical specification. Anderson and Neary’s concern about the unweighted average tariff is based on the idea that all commodities cannot be treated as equal weights. If my main research concern is to analyze tariff levels and structure, then I would argue that I would want to give equal weight to all commodities that have been included here (see 5.3.1). Therefore I have chosen to go with the unweighted average tariff when I talk about average export and import tariffs and tariffs on the commodity group level.

\textsuperscript{34} Ibid.
\textsuperscript{35} Anderson and Neary, (2005), p. 13.
\textsuperscript{36} On the scarcity of Swedish consumption data in the early modern period, see Ahlberger, C. (1996). \textit{Konsuntionsrevolutionen. 1, Om det moderna konsumtionssamhällets framväxt 1750–1900}. Göteborg: Humanistiska fakulteten, Univ.
5.3.3 Some Notes on Prices and Specific Tariffs

Tariffs for Swedish foreign trade are found in a series of yearly proclamations, decrees and resolutions from the royal government. They are organized both alphabetically and by category, which means that some larger commodity groups are found alongside one another: for example all iron and steel are in one group and most textiles in one grouping. Each type of good within these groups is, however, presented separately, which makes for quite a detailed study of the individual tariffs. This has been supplemented by data on grain tariffs that lay outside of the ordinary revisions (see above) as collected and provided by Åmark.

Some words need to be said on the origin of the price data used here. The basis for the price series are the same as was used to re-calculate the trade figures in chapter four, which means domestic prices have been used for exports and mainly international/foreign prices for imports. Certain additions have been made, however, when price data is missing, particularly with regard to finer types of textiles such as colored silk. It has been necessary to take into account the fact that finer, sometimes processed or colored, textiles were priced higher than raw fabrics. Price series for these types of textiles have been estimated by taking the difference between the estimated values of raw fabrics and processed textiles that are found in the tariffs lists, and re-calculating them based on the price of the raw fabric. As an example, the difference in the estimated value of uncolored and colored silk in the tariff lists was two throughout most of the period. Hence, colored silk has been estimated as being two times the price of uncolored silk.

As stipulated by the Navigation Act of 1724, the tariffs on certain commodities were differentiated depending on whether they were shipped on domestic or foreign vessels, where the aim was to promote the former and discriminate against the latter. This concerned mostly exports where more or less every larger commodity was given a higher tariff when shipped on foreign vessels. This higher duty was called the “unfree” tariff, while the lower domestic duty was called “free”.

Differentiation could also occur depending on the geographical origin of commodities. This concerned particularly those goods that were imported by the East India Company, which were given lower tariffs compared to if they had been brought in from other areas. Among the goods here, these differentiated rates were levied on tea, uncolored silk, and pepper. This practice was in use exclusively before 1816. The tariff on raisins was differentiated so those of

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39 “Kongliga placater, resolut, förordningar och påbud”, available at Carolina Redviva, Uppsala. After 1825 they are found in SFS, Svensk Författningssamling.
40 Åmark (1915), pp. 382–383.
Mediterranean origin (French, Spanish, Portuguese and “other Mediterranean” ports) had a lower duty.\(^{41}\)

The system of partial differentiation gives rise to some thoughts on how Swedish tariffs should be calculated. At first glance it seems reasonable to take these factors into the calculation, and for instance weighting free and unfree tariff rates where they are applied. One could weigh based on how much of a certain commodity was shipped on domestic or foreign vessels, in order to get as accurate a measurement as possible. Certain shipping data on the aggregate level is available and usable, but unfortunately it seems close to impossible to come across on a commodity-by-commodity-level. For imports, the unfree specific tariff was usually 40 percent higher than the free, although certain commodities, such as cotton, had an even higher unfree tariff. For exports, the unfree specific tariff was usually 50 percent higher than the free, even though forestry exports had an even higher unfree specific tariff before 1816 and the export tariff on herring did not differentiate between free and unfree shipping at all.\(^{42}\)

The way I have weighted the free and unfree tariff into one unison tariff is to use a shipping benchmark which will be applied the same every year. Högberg reports that the ratio between free and unfree shipping concerning Swedish goods was usually 80-20 during the Gustavian era (up until 1809), meaning 80 percent of goods to and from Sweden were shipped using vessels with free status and 20 percent on vessels with unfree status. Högberg, however, also notes a big drop in domestic shipping between 1788 and 1790 during war with Russia; in 1788 the outgoing domestic tonnage was less than 60 percent of the total, in 1789 it was a mere four percent and in 1790 only twelve percent. Högberg argues that these exceptionally low numbers are not fully reliable; the true scale of Swedish shipping was likely higher than the numbers reveal. War-time obstacles to shipping were likely partly circumvented by Swedish ships sailing under foreign flag.\(^{43}\) The second war with Russia in 1808–1809 seems to have entailed a similar decrease in domestic shipping, as was also indicated by the data on freight balance in chapter four, but the exact numbers are somewhat unreliable here as well. Data on free and unfree shipping is also available for the brief period 1819–1822, where the ratio overall was also 80-20.\(^{44}\) Based on this, I have decided to use the 80-20 ratio, despite the uncertain possibility of war-time exceptions, as the benchmark for weighting the specific free and unfree tariffs. The only years this procedure has not been used is between 1806 and 1814 – when the Navigation Act which regulated

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\(^{41}\) Raisin tariffs were also special since they were set even lower when being used in cider or vinegar production. A special license was needed for distilleries that wanted to receive tariff relief.

\(^{42}\) See Högberg (1969), pp. 28–30 and section 5.1 here.


\(^{44}\) Data from Generaltullstyrelsen 1819–1822.
free and unfree shipping and tariff-setting was temporarily suspended.\textsuperscript{45} During these years only the free tariff was in use for shipping to and from Sweden. This means that during the entire period, bar the years from 1806 to 1814, the weighted specific import tariff will be eight percent higher than the free specific import tariff, since the unfree import tariff was 40 percent higher than the free and is given a 20-percent weight. Similarly the weighted specific export tariff will be roughly ten percent higher than the free specific export tariff, since the unfree export tariff was 50 percent higher than the free and is given a 20-percent weight.\textsuperscript{46} As mentioned above there were certain exceptions to this general differentiation where an even higher unfree tariff was applied to certain goods. With imports, this was applied particularly to raw cotton, which had an unfree tariff that was more than 50 times that of the free tariff (this was before 1817; after that the same differentiation was applied as on other imports).

One individual commodity has been weighted, which is worth mentioning. The import tariff on salt was slightly differentiated depending on origin, with different tariffs being set depending on whether it was imported from Mediterranean or British ports. Here, trade weights are luckily a help since trade statistics also differentiated between whether salt was imported from Spain, Portugal, or England. Since I have prices for all three types of salt, it has been possible to weight them into one salt tariff.

Commodities that were divided into several subcategories have been averaged into one tariff. This was especially the case with battens and timber, which were divided into as many as 28 different subcategories based on length and thickness. Here the simple arithmetical average of all subcategories has been used to make one tariff.\textsuperscript{47}

A brief methodological summary might be in order at this point. Tariffs will be measured as ad valorem rather than specific in order to be able to make comparisons between commodities, over time and between countries. They will be unweighted averages since trade-weights tend to understate high tariffs and commodities with low or zero import, and TRI and MTRI are sensitive to statistical specifications. The differentiation in tariff rates between domestic and foreign shipping have been taken into account by weighting them using a shipping benchmark.


\textsuperscript{46} Since mathematically if the free tariff is 1 riksdaler, then the unfree is 1.4 (40 percent higher) and weighting them together according to the ratio 80-20 yields: (1x0.8)+(1.4x0.2) = 1.08. Equally for the free and unfree export tariffs: (1x0.8)+(1.5x0.2) = 1.10.

\textsuperscript{47} It should be noted that all battens and timber were given more or less exactly the same tariff ad valorem regardless of length or thickness.
5.4 Swedish Tariffs 1783–1830

Export tariffs and import tariffs will be presented separately. Most attention will be given to imports, where tariffs will be broken down into subcategories. The third part of this section will deal with customs revenue from both exports and imports, while also breaking down revenue by commodity.

5.4.1 Export Tariffs

Taxing one’s own exports might seem intuitively counter-productive – would you not in a mercantilist world want your exports to flow as freely as possible with no additional state-imposed costs? Still, setting tariffs on exports was done in Sweden from the early 18th century well into the 19th, and practiced in Denmark and quite a few other European countries as well; see table 2.2 in chapter two. This section will show that this system was partly downgraded during between the 1780s and 1830s, while part 5.4.3 on customs revenue will partly confirm previous hypotheses regarding why tariffs on exports were used in the first place.

Tariffs were levied on all major Swedish exports throughout this period. Figure 5.3 shows how export tariffs on the aggregate level decreased steadily, going down close to ten percentage points from the 1780s to the 1820s. Up until 1815, the big drop was mostly a result of the fact that export prices increased quite steadily while specific tariffs remained mostly unchanged. The revision of 1818 set a new standard for the tariff rates – while there earlier had been no ceiling for how high an export duty could be, no individual commodity was now taxed at any more than five percent ad valorem. Danish export tariffs were levied on a similar number of goods, but generally set at lower rates than the Swedish – at 2.5–3.0 percent on average throughout this period.48

This aggregate conceals certain significant differences that existed between individual commodities (for the nominal tariff rate per commodity, see appendix C). While most exports were taxed at a consistently low rate throughout the period, around one or two percent, commodities such as battens, timber, pitch, tar, bar iron and copper stood out before 1818. Particularly battens and timber had high tariffs, for the former between 20 and 40 percent and for the latter up to 80–90 percent with this ad valorem measurement. When export tariffs were increased on timber in 1782, it was argued that exports needed to be restricted in order to retain a sufficient level of domestic supply; the tariffs here hence served as a sort of quantitative restriction.49 Pitch and tar had tariffs on the order of 10–15 percent, while those for bar iron and copper were set at 5–9 percent. The biggest changes thus occurred to these six exports

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48 Based on my own calculations of Danish tariffs. Tariffs for 1782 and 1797 found in Rasch (1955). Thorbrogger has tariffs from 1816 and 1823. Becker-Christensen (1988) notes that revisions were made to tariffs across the board in 1803, 1806 and 1809 to adjust for inflation.

over time, and particularly battens and timber had significantly lower tariffs after 1818. A key ingredient here was the influence of exporters of forestry goods. Before the parliamentary session of 1817/1818, the forest industry felt pressured. The beneficial circumstances of the Napoleonic Wars, when the export of competitors such as Russia and Prussia had been circumscribed, had turned into somewhat of a recession after the war. In particular, increased British import tariffs on forestry commodities had begun to take their toll on Swedish exporters. The latter now voiced heavy critique against the domestic restrictions on exports in the form of tariffs. The parliament’s standing committee on appropriations suggested serious cuts to the export tariffs on forestry goods, which after some debate won full support of the Diet. It was believed that the decrease of export tariffs would not only encourage an increase in exports, but also increase industriousness and generally benefit the state without depleting the forests.50

Figures on re-export tariffs were only available for two commodities. The rate for both sugar and coffee was set at 0.25 percent ad valorem throughout the period. Worth noting is that the most consistent re-export, salt, was not included in the tariff lists, meaning it was probably re-exported completely duty-free.

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50 Montgomery, (1921b), p. 12.
5.4.2 Import Tariffs

Import commodities were generally more plentiful than exports, which of course meant the same for tariffs. This allows for a more detailed study of import tariffs, and a possibility to try to discern a tariff structure. A key in analyzing structure is to try and see a difference between lower and higher rates – are there palpable differences between commodities and for what reason might they have been set that way? This section of the analysis will be divided into several sub-sections where tariffs on groups of commodities and individual commodities will be scrutinized.

Tariffs on imports were revised in 1782, 1794, 1799, 1816, 1824, and 1826 – all taking effect on January 1st the subsequent year. The unweighted average (see section 5.3.2) of all 50 import tariffs is displayed in figure 5.4.

Tariffs started out at quite a high level of around 30 percent ad valorem in the beginning of the 1780s. They decreased steadily over time as a result of sharply increasing import prices and largely unchanged specific tariffs. Tariffs were increased both in 1794 and 1799, but as can be seen this had very little impact on moving the average tariff upwards. When the average import tariff hit its bottom for this period in 1815, it had decreased by a little more than half. Many nominal rates were then increased with the revision of 1816 (taking effect in 1817), as becomes clear in the graph. The average rate was again over 20 percent in the beginning of the 1820s, and towards the end of the decade they were back at the levels of the 1780s, close to 30 percent. The average import tariff hence gives some support to Montgomery’s view that the years

Figure 5.4 Ad valorem Import Tariffs, Unweighted Average, 1783–1830

Source: Kongliga placater, resolut, förordningar och påbud, 1782, 1794, 1799, 1816, 1824; Svensk författningssamling, 1826; Jacobs & Richter (1935); Posthumus (1946); Jörberg (1972); Clark (2004).
of the Napoleonic Wars were slightly more liberal and protectionism made a return once the war was over. It is difficult to say whether Sweden stood out compared to other countries, since so little information exists about average ad valorem tariffs for most countries during this period, as shown by Bairoch’s classification in chapter two. According to my own calculations, Denmark had lower average import tariffs than Sweden during this entire period, but mostly so between 1797 and 1815 – after the famous liberalization of 1797 and before Danish agricultural tariffs were markedly increased in 1816 and 1823.

A bit more detail is provided by figure 5.5 where tariffs have been split up into six different categories, depending on the origin and use of the commodities. These six categories will then be analyzed separately in order to provide even more insight.

Here we can start to see some evidence of a discernable tariff structure with clear differences between groups of commodities. Alcohol imports were generally set high, being no lower than 40 percent ad valorem except for during the brief period 1810–1815. Exotic imports, such as sugar, coffee and tobacco, were usually a category that was taxed rather high and this was at least the case before 1816. Metals and forestry consisted of those goods that were Sweden’s chief exports and had rather high tariffs throughout the period, even though metals dipped between 1800 and 1815, and forestry import tariffs

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51 Three commodities – train oil, pit coal and linseed oil – have been included in the generic category “other” and will be presented as its own category.
were decreased after 1826. Textile tariffs started out rather high, close to 30 percent, but decreased steadily over the period and ended up with generally low rates in the 1820s. Agricultural tariffs, such as for grains, beef, potatoes and dairy, were consistently low until they were increased in two steps in 1817 and 1825.

Even a breakdown into sub-categories hides certain interesting and significant differences between individual commodities. Although differences between groups of commodities can be spotted, the movements occurring at the individual commodity level are interesting as well. Figures 5.6 through 5.13 show tariff rates down to the commodity level.

Alcohol is one of those commodity groups that needs to be analyzed from the vantage point of whether these products have any domestic substitutions or not. As we saw from the debate between Nye and Irwin in chapter one, alcoholic beverages are not easily described as either protectionist or fiscal. Depending on taste and consumption culture, different alcoholic beverages can substitute for one another, but we cannot necessarily assume this a priori. Drinks like wine and port had no equivalents in Swedish production, while beer and spirits such as brandy and rum did have domestic equivalents. Beer breweries were still few in number towards the end of this period (from when statistics are available), but their production was on average five million liters per year between 1810 and 1830.\footnote{Sveriges Bryggerier, \url{http://sverigesbryggerier.se/om-oss/historia/gamla-bryggerier/antal-olbryggerier-samt-olproduktion/}. That is roughly five times the amount of wine of all types that was imported during the same time, based on the

Figure 5.6 Ad valorem Alcohol Import Tariffs 1783–1830

Source: Kongliga placater, resolut, förordningar och påbud, 1782, 1794, 1799, 1816, 1824; Svensk författningssamling, 1826; Posthumus (1946); Clark (2004).
import statistics from chapter four. Beer was imported as well, but only in small quantities and of special types – most commonly English porter. The high tariffs on foreign beer could hence be seen as protection of domestic breweries. Even though this protection was eased somewhat over time, it still remained high at around 50 percent from 1816 to 1830.

What can we make of the tariffs on wine and port? First of all, one can note that French wine was discriminated against in relation to Portuguese wine in the tariff scheme, much like the English system did during the 18th and much of the 19th century. Duties on French wine were three to four times higher during most of the period. Second, tariffs on French wine were certainly high enough to deter some level of import, but did not work like an import ban to completely keep it out of the country. The lower levels of wine imports compared to domestic production of beer could point to two things: (1) beer was a cheaper and more widespread drink enjoyed by a larger segment of the population, while wine was considered more of a luxury; (2) domestic production of beer was promoted to the detriment of foreign wine. These two possibilities need not be natural opposites, but could be complementary facts. Wine was in fact considered a luxury, and was pointed out as such consistently in tariff legislation.

Tariffs on brandy and rum were generally high, usually above 40 percent and even as high 90 percent during the 1820s. These spirits were imported in lower quantities than wine, averaging 750,000 liters per year with a particular peak between 1806 and 1814 of 2.7 million liters per year – when much of it was re-exported without entering the country for consumption. Drinks with a high alcohol content did not necessarily compete with domestic drinks such as beer, but they could however be said to be competitors with the production of domestic brandy made from potatoes or grains, brännvin. Brännvin was distilled domestically, and was even subject to a particular tax which became an increasingly important source of government revenue. The consumption of rum was usually reserved for the higher classes of Swedish society, such as merchants, although Joachim Mickwitz has noted that sales of rum increased after the end of the Napoleonic Wars. Foreign spirits, as mostly luxury consumption goods, might therefore not have competed with domestic brandy and beer; due to culture, status and price they could probably not be seen as equal substitutions.

Exotic imports are often analyzed in a similar vein as alcohol. Given that they are “tropic” by origin, they often have no domestic substitute in northern economies. One commodity included in this group that stands out is salt. The reason is that Sweden completely lacked domestic capabilities, mostly climatic, to produce salt – and hence became reliant on imports for its supply.

for food-preservation and as a seasoning. The relatively high salt tariffs during the first half of this period hence become somewhat puzzling. It seems, however, that the high tariffs did not disrupt the salt trade or supply for the domestic market. A comparison of import levels and re-export levels indicates that the amount of salt which remained in the country actually was higher when tariffs were higher, particularly before 1810. This is also somewhat perplexing considering that the population kept growing over the period – so the domestic demand should have been higher in the 1820s than in the 1780s, not lower. A possible explanation is that the big drop in herring exports after 1807 (see figure 4.2) may have decreased the need for salt. Finland also accounted for a few percent of aggregate salt imports, which may also have had a small effect on levels after 1809. When tariffs on salt were cut in 1816, it was argued that these types of “goods of necessity” needed tariff relief, although the argument was not specified further. If there is no clear connection between salt tariffs and salt imports, the question is what purpose the tariffs served?

While salt was considered a “good of necessity”, commodities like coffee, tea and sugar were, like wine and spirits, considered to be more luxuries. Particularly coffee had a complicated relationship with lawmakers. It was placed on the list of banned imports in the Abundance Ordinance of 1766, then removed in 1787 – only to be banned again between 1794 and 1802.

Even though it spread to a wider segment of the population during this time, it is clear that lawmakers tried to limit its advance. Import bans and high tariffs are clear regulations, but there were also attempts made to limit the sale of coffee in coffeehouses. The government wished for the public to limit its consumption of foreign consumption goods in favor of the Swedish-made. It even suggested that citizens should not drink foreign coffee, but switch to a domestic surrogate made from chicory. It is, however, doubtful that these restrictions and high tariffs actually limited the spread of coffee, as import levels actually increased over time. Ragnhild Hutchinson has argued that since attempts to ban and restrict coffee were so recurring, this would indicate that they had limited or no impact. Highly fluctuating tariffs on coffee as evident in figure 5.7 point in a similar direction. The decrease in tariffs on tea probably had to do with the dissolution of the Swedish East India Company in 1813, as duties on tea (and porcelain) were no longer designed to promote the company's monopoly trade.

The import of tobacco was also taxed fairly highly, even though there was a drop to around ten percent between 1813 and 1825. Just as with sugar, the tariff code on tobacco was designed to promote domestic manufacture. This was done so that only tobacco leaf and raw sugar were allowed entry, except for a few years when limited quantities of processed tobacco and refined sugar were imported. The import of more refined types of both goods was prohibited or set with even higher tariffs than for the raw varieties. This does not explain why sugar was consistently taxed higher than tobacco, certain years twice as high. Sugar was also imported in consistently higher quantities, measured in pounds. Tobacco was usually re-exported to a greater extent, so less of it than sugar was being used by domestic producers. A reason could have been that the domestic cultivation of tobacco occurred on quite a large scale, while raw sugar had no base for domestic production. The numbers seem however to suggest that imported raw tobacco outweighed the domestically grown variety for most of the period. There are some fluctuations over time, but table 5.1 shows that imported volumes of tobacco made up on average 75 percent of the total amount produced in Swedish factories.

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59 Heckscher (1949).
60 Note that tariffs on refined sugar and processed tobacco are not included and reported here. The tariff code however clearly set higher duties on higher degrees of refinement, as also indicated by Rönnbäck (2007) when it came to sugar.
The tariffs on most exotic imports dropped quite significantly during the Napoleonic Wars, which had mostly to do with rapidly increasing prices, particularly on sugar, but also on tea and tobacco for instance. The second half of the 1820s then saw increasing tariffs again on sugar, tobacco and coffee when prices were more stable or even declining, but specific tariffs were raised.

Pepper was imported in smaller quantities, and had low to moderate tariff rates. Raisins were taxed similarly, but occasionally reached quite high import levels. Before 1816, when levels decreased, imports stood on average at close to 580,000 pounds per year.

Both Eli Heckscher and Sven Gerentz have written extensively on the Swedish textile manufacturing sector and the government support it received during the 18th and early 19th centuries. As is clearly evident the tariff structure was designed to discriminate between inputs for domestic producers and manufactured foreign textiles. Here they have been split and presented in two diagrams for the sake of clarity. Figure 5.8 shows that raw hemp, raw flax, raw cotton and undyed silk were imported at low or very low tariff rates through most of the period. The tariffs on raw cotton and flax were increased quite significantly in 1826 however, while that for raw wool on the other hand started out at moderate levels, but decreased over time. The two major dyes, cochenille and indigo, were brought in at consistently low duties as well. The tariff for leather, here sole-leather mainly for shoes, fluctuated quite heavily between 10 and 25 percent which made leather the overall highest taxed input among textiles and clothing.

Figure 5.9 shows that dyed silk and finer types of hemp, flax and wool, on the other hand, had high tariffs, as protection and export subsidization for domestic producers. Especially the manufacturing of wool and flax were heavily protected during the first two decades here. Several of these foreign manufactured textiles had also been on the list of banned imports from the Abundance Ordinance and were hardly ever imported at all. What is interesting to see is that this clear differentiation between textiles based on degree of

<table>
<thead>
<tr>
<th>Year</th>
<th>Imported</th>
<th>Domestic</th>
<th>Total processed</th>
<th>Percentage import</th>
</tr>
</thead>
<tbody>
<tr>
<td>1780</td>
<td>1034759</td>
<td>248642</td>
<td>1283401</td>
<td>80,6</td>
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<td>1790</td>
<td>735625</td>
<td>872696</td>
<td>1608321</td>
<td>45,7</td>
</tr>
<tr>
<td>1800</td>
<td>1365408</td>
<td>430914</td>
<td>1796322</td>
<td>76,0</td>
</tr>
<tr>
<td>1820</td>
<td>1887860</td>
<td>50095</td>
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</tr>
<tr>
<td>1830</td>
<td>2583673</td>
<td>183678</td>
<td>2767351</td>
<td>93,4</td>
</tr>
</tbody>
</table>

Note: Figures in pounds. Collected, processed and kindly shared by professor Mats Morell. Source: Kommerskollegium, arbetsstatistik; Tobaksutredningen 1904.
**Figure 5.8** Ad valorem Textile Raw Materials Import Tariffs 1783–1830

![Graph showing ad valorem tariffs for various raw materials from 1783 to 1830.](image)

Source: Kongliga placater, resolut, förordningar och påbud, 1782, 1794, 1799, 1816, 1824; Svensk författningssamling, 1826; Jacobs & Richter (1935); Posthumus (1946); Jörberg (1972); Clark (2004).

**Figure 5.9** Ad valorem Finer Textiles Import Tariffs 1783–1830

![Graph showing ad valorem tariffs for finer textiles from 1783 to 1830.](image)

Source: Kongliga placater, resolut, förordningar och påbud, 1782, 1794, 1799, 1816, 1824; Svensk författningssamling, 1826; Posthumus (1946); Jörberg (1972); Clark (2004).
refinement decreased over time. The difference between raw and finer flax was completely gone after 1824, while the difference between undyed and dyed silk was only a few percentage points. Differences with regards to wool and hemp still existed, but were significantly smaller in the 1820s compared to the 1780s and 1790s, especially for wool. One can further note that the import tariff on cotton was very low until 1826, when it was increased to over 20 percent ad valorem.

The protection of textile manufacturers was long-standing and pervasive. It was argued by the government around the turn of the 18th century that foreign fabrics were not to be allowed to penetrate the Swedish market, as they would completely crowd out domestic products. The government even admitted in an official letter to the Board of Trade in 1798 that Swedish textiles were inferior compared to the foreign products both in price and quality. Manufacturers, however, complained that the government authorities had not fully safeguarded their interests. Even though the differentiation system and protectionist levels for textiles declined over time, as can be seen above, Sven Gerentz writes that the liberalizations and tariff cuts made in 1824 and 1826 meant little for the possibilities of foreign manufactured products to compete with the Swedish: “the supporting pillars of the protectionist system remained unmoved”. Part of the reason why tariff rates on finer textiles declined over time is that these duties were set at specific rates, a fixed amount per pound of fabric, and hence decreased measured as ad valorem as prices rose more than the specific tariff was increased.

Most agricultural tariffs were kept low during the first half of the period, bar for cheese which was most often set at between 15 and 20 percent ad valorem. Quite large changes occurred with agricultural tariffs from 1816 and onwards. First, potatoes were moved to the list of banned imports and were subject to a steady tariff of 50 percent. Tariffs were also increased on cheese, butter and beef, where the increase on the two latter goods was steep. The tariff on butter was raised from around 5 percent to over 20, while that for beef went from 5 percent to 50 percent in 1825 and then down to around 20 percent from 1827 to 1830. The tariff on pork moved in a very similar direction, being below 10 percent before 1824 and then moving up to 50 percent while receiving moderate protection of slightly above 20 percent between 1827 and 1830. Grain tariffs fluctuated quite heavily from year to year in order to adjust for how the domestic crops fared and whether imports were needed to fill domestic demand. As Åmark noted, they became quite prohibitive during the 1820s, however, with the exception of the years 1825 and 1826 when they were set at ten percent ad valorem.

Montgomery has pointed out that agricultural interests were the most significant and influential at the time, perhaps not surprising given its weight

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in the national economy. Agriculture had experienced difficult times during the Napoleonic Wars and had not benefitted from the blockades nor from the temporary suspension of the Swedish Navigation Act during the time of the blockades. Therefore those representing agricultural interests made their voices heard before the tariff revision of 1816 and demanded increased protection from foreign competition.\textsuperscript{64} Swedish agriculture also experienced increased production from the beginning of the 1800s. Output figures for grains and potatoes in table 5.2 show a steady increase from 1802 to 1830. The increase in output was tremendous over this 30-year period – almost twofold for grains and more than tenfold for potatoes. This boost in production meant that whereas Sweden earlier had been more or less completely reliant on imports of grains, by the 1820s there was a surplus that could be exported. Grains went from being the single largest import commodity during the 1780s and 1790s to being an export of some significance in the 1820s.\textsuperscript{65} In light of such production gains, it was reasonable for producers and lawmakers alike to want to shelter such a sector from foreign competition. This was done for producers of grains and potatoes, but also for those involved in dairy and meats. This is accentuated by the argument that the state in the 1820s wanted to support those farmers who sold their goods, rather than those who had to

\textsuperscript{64} Montgomery (1921b), p. 6.

When agricultural interests argued for increased protection again in 1823, it was also from the fear of falling prices due to this increased productivity. Voices were raised in the appointed finance committee stating that agriculture could be helped by a relief in its tax burden, and that this could be accomplished by an increase in customs revenue. Agricultural interests received protection in the form of prohibitive grain tariffs. Tariffs were increased on dairy and meats as well, but it is more unclear whether this had a protectionist impact. This issue will be explored further in chapter six.

The cultivation of potatoes was promoted more and more by lawmakers from the beginning of the 19th century. Domestic cultivation was furthered in 1817 when the import tariff on potatoes was set at a prohibitive level of 50 percent, which was retained until 1830. Mats Morell has argued that the potato was “perfect for the ruling mercantilist doctrine” in that it could be a cheap source of food for the poor, as well as possibly decrease the need for grain imports.

The category “metals” comprised some of Sweden’s main exports during the time — iron, copper, but also steel and alum. According to Sven Gerentz, the sheltering of iron manufacturers from foreign competition was initiated in 1782, when this analysis starts. Iron had come under competition on the European market from Russian iron. Russia had surpassed Sweden as the most important exporter to Britain already in 1760s, due to the lower price of Russian iron. When the tariff committee of 1782 gave its verdict on why iron producers needed protection from foreign goods, it was argued that the country’s “own assiduity and industry as well as domestic laborers’ services” should be sheltered.

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67 Montgomery (1921b), p. 16.
68 Morell (2013), p. 84.

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Table 5.2 Output of Grains and Potatoes in Metric Tons 1802–1830

<table>
<thead>
<tr>
<th>Year</th>
<th>Grains</th>
<th>Potatoes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1802</td>
<td>474</td>
<td>44</td>
</tr>
<tr>
<td>1805</td>
<td>480</td>
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<td>1810</td>
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</tr>
<tr>
<td>1815</td>
<td>555</td>
<td>122</td>
</tr>
<tr>
<td>1820</td>
<td>625</td>
<td>216</td>
</tr>
<tr>
<td>1825</td>
<td>772</td>
<td>404</td>
</tr>
<tr>
<td>1830</td>
<td>816</td>
<td>469</td>
</tr>
</tbody>
</table>

Source: Mitchell (1975)
In the tariff code, bar iron and iron manufactures (such as bundle iron and bolt iron) were separated, but as can be seen in figure 5.11 they had very similar or the same tariff rates of 55 and 60 percent respectively until 1816 when the tariffs on both increased to 100 percent ad valorem. As mentioned earlier, this was how tariffs were set on commodities that were on the list of banned imports, as steel also was even though it had a moderate protective tariff of 20 percent before 1816. Iron and steel had a zero level of import during this entire period, with the exception of the small amount of 37 ship-pounds of bar iron that was imported in 1828. Alum was also protected during the 1780s and 1790s, but the ad valorem tariff dropped until 1816 as a result of an increasing price and maintained specific tariff. Protection was then reinstated with the revisions of 1824 and 1826, after which the rate was back over 30 percent, as it was in the beginning of the period. Copper had a moderate protection rate in the beginning of the period, being slightly below 30 percent in the 1780s and then dropping down to just above 10 percent between 1810 and 1815. The tariff was then increased sevenfold in 1816, only to drop below 10 percent again in 1826. The export of copper fluctuated heavily after 1816, so it could be that the fluctuating import tariff reflects a possible need to meet domestic demand with foreign imports during certain years.

Much as different types of textiles were differentiated depending on degree of refinement, the Swedish tariff structure also differentiated a great deal between unprocessed and processed lead and tin. Unprocessed lead was a stable import during the period, with slightly more than 1,700 ship-pounds per

\footnote{Note that certain years cast steel is exempt from the list of banned import.}
The import level was, however, about three times as large on average before 1815 as after. Processed lead was, however, hardly imported at all. The tariff on processed lead was very high before 1800, when it dropped from over 130 percent ad valorem to below 70 percent. The differentiation between the two types of lead decreased quite a bit over time, especially after 1826 when the difference was only around 10–12 percentage points. The differentiation between unprocessed and processed tin was smaller, and the latter was taxed at around 20 percent before 1800, which decreased notably during the Napoleonic Wars. Note that the tariff on processed tin was slightly increased in 1825, after which it lay between 25 and 30 percent.

It should be noted briefly that gold and silver bullion was usually imported completely duty-free throughout the entire period.

Just as with iron and steel, the forestry category contains some of Sweden’s major exports. This meant particularly battens, but also pitch and tar in the beginning of the period. As a result, these commodities were not imported at all for most of the period. An exception is tar; some 9,000 barrels were imported per year on average in the 1820s. This coincided with a steep drop in exports, which could mean that domestic production was not enough to meet domestic demand. One possible explanation for this is the loss of Finland, which earlier had accounted for a large part of Swedish tar production. It is then possible that domestic demand needed to be met by imports from Finland, now part of the Russian empire. This might explain as well why the import tariff on tar was eased down first to 25 percent in 1824 and then below 20 percent in 1826, from being protected at 55 and 50 percent ad valorem earlier.
Less has been written about the protection of the forestry sector than about the textile and iron manufacturers. The production and export of battens, timber (as well as rafts, spars and laths, not specified and displayed here) and pitch and tar was as protected as that of iron and steel during the majority of this period, all being on the list of banned import and having tariffs set at 55 percent before 1800 and 50 percent thereafter until 1825. The import bans on all these commodities was, however, lifted in 1826 and replaced with specific tariffs, and so the tariff rate dropped quite steeply on pitch and battens, and slightly on timber and tar. The protection of the forestry sector was hence loosened up in a manner similar to what was done for textiles.

One young industry which received increased protection during this period was the production of pit coal. Here the rate on the import tariff of pit coal was increased from the low levels of 1–2 percent to 25 percent ad valorem in 1825, and then was retained at a moderate level of protection of 13–14 percent from 1827. The explicit reason on the part of the government was to protect a budding industry in Skåne. The exact wording was that the mining of pit coal by Skånska Stenkolsverket would be “encouraged and furthered” through an increased tariff on foreign pit coal for as long as domestic production was undertaken.\textsuperscript{72} Import penetration of pit coal did fall after the increase of the tariff, but some 40,000 barrels per year on average were still imported during the 1820s, indicating that import substitution had a slow start. This was, however, about half the import level of pit coal between 1780 and 1813, so something did at least start to change with the tariff increase.

\textsuperscript{72} Kungl. Maj:ts kungelser, Kungörelse angående förhöjning i tullen å utländska stenkol, Stockholm den 6 oktober 1813.
Train oil had a low tariff below five percent the entire period, but was generally not an import of any significance before the 1820s. The duty on linseed oil was generally low as well, but set at 20 percent in 1825. Imports were, however, higher towards the end of the period, especially during the second half of the 1820s, so it would be difficult to interpret this as any attempt at import substitution. The moderate level of the tariff would rather indicate that it served fiscal purposes.

5.4.3 Tariffs as a Tax Base – Customs Revenue 1783–1830

Customs revenue is collected on each individual commodity that is imported or exported, given that it was set with a tariff. Duty-free commodities do not contribute to customs revenue by definition. In times when fully developed tax systems were not yet in place, these types of trade taxes often made up the majority of governments’ income. From the beginning of the 20th century they would be replaced by taxes on income and capital as the most important sources of revenue in most states in the West.

Here customs revenue on the aggregate and commodity levels is analyzed in order to be able to determine whether certain tariffs were set just to raise revenue, or whether protectionist and fiscal concerns could, plausibly, intertwine for certain commodities. Figure 5.15 shows customs revenue on the aggregate level, while figure 5.16 measures customs revenue as a share of total government income and figure 5.17 breaks down revenue by the most important commodities. Since revenue data is not available for every single commodity in any official source, the data underlying figure 5.17 has been

Source: Kongliga placater, resolut, förordningar och påbud, 1782, 1794, 1799, 1816, 1824; Svensk författningssamling, 1826; Jacobs & Richter (1935); Jörberg (1972); Clark (2004).
estimated. This has been done by taking the quantity imported or exported for every commodity times its specific tariff for the same quantity, in order to arrive at customs revenue in riksdaler banco. This will not provide exact figures, but rather an estimation which is close to the empirical reality.

Total Swedish customs revenue often stayed quite steadily around one million riksdaler per year during the 1780s and 1790s. There was a significant dip below a half a million from 1803 to 1808, which is explained by the fact that the administration of customs revenue during those years was handled by the Customs Leasehold Society. This meant that any profits from customs revenue were divided equally between the Crown and the Society, in effect meaning lower revenue for the government. The practice of customs revenue being handled by a private company, together with representatives from public administration, had also been in effect between 1777 and 1782, but was outlawed in the new constitution in 1809. Customs revenue then increased between 1813 and 1815, a result of the big increase in imports during the Continental System as presented in chapter four. Quite a large jump upwards then occurred again after 1825 to levels above two million riksdaler per year as a result of increasing import tariffs overall, but particularly on certain commodities such as sugar, tobacco, and coffee.

The loss of Finland in 1809 had an impact on trade, as shown in chapter four, and so also affected customs revenue. Revenue collected in Finnish ports had made up on average six percent of the total between 1783 and 1807.

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The loss that this entailed for Sweden proper was, however, to some extent compensated for by the opening of more ports along the northern coast of the country, which probably took over the shipping and collected customs revenue that earlier had gone to Finnish ports along the Baltic coast.

Income from trade taxes was hence quite steady over the period and increased during the second half of the 1820s. The question is how much it contributed on aggregate to government income?

Figure 5.16 shows quite large fluctuations, where dips occurred first in 1790 as total government revenue increased explosively due to the war with Russia and then between 1803 and 1808 as the central government’s proportion of customs revenue decreased (see figure 5.15). Customs revenue contributed on average slightly over 20 percent to government revenue over the period, with the average being close to 25 percent during the 1820s. Between 1810 and 1830 (when it is possible to compare income items in detail), customs revenue was the single largest source of income in the budget of the central government proper. This was close to English levels during the same period (see chapter two), but historically customs revenue contributed slightly more at later times during the 19th century. At the end of the 1840s customs revenue was over 40 percent of total government revenue and over 30 percent in the 1890s.

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Source: Sjökontoret, Bokslutskontoret, RA; Tabeller över statsverkets inkomst och utgifter 1810–1850; Åmark (1961).

74 Tabeller över statsverkets inkomst och utgifter 1810–1850.
The government was hence quite dependent on customs revenue as tax revenue during the period, which shows the importance that tariffs had fiscally.

When customs revenue is broken down by contributing commodities, we can start to ponder which tariffs may have been set for fiscal motives. Figure 5.17 displays the individual commodities which generally contributed the most to customs revenue. These commodities made up on average close to 80 percent of total revenue from customs during the period. The remainder up to 100 percent was usually made up of small contributions by each of the remaining commodities, except for butter and leather which each contributed between three and nine percent of the total towards the end of the period. The concentration of customs revenue to relatively few commodities was hence rather high given how many items were imported (and exported) and taxed, although not as high as the British whose customs revenue was almost entirely made up by the tariffs on a few exotic foodstuffs (see chapter two).

This shows the importance of the tariff on exports of bar iron, particularly before 1800 when it provided almost 20 percent of total customs revenue. There was then a decline, as export tariffs were lowered in 1817 and other commodities became more fiscally significant, but it still contributed close to ten percent after 1815. The importance of bar iron exports for customs
revenue was acknowledged by contemporaries, for instance when there were talks of lowering export tariffs in 1782 in order to compete with Russian iron on the British market. It was, however, concluded that this would entail a noticeable decrease in the state’s annual income from tariffs. With the revenue concerns that were present in the beginning of the 1780s, such a loss of income “could not occur”. When tariffs were eventually decreased in 1818, in order to increase the competitiveness of Swedish iron which had been partially lost ground during the Napoleonic Wars, the government was again concerned that this lowering of export tariffs would entail a loss of revenue. It was then argued that “to compensate our decreased incomes the fee shall be raised on goods which have to do with luxurious living and affluence instead.” When suggestions came to remove the tariffs completely in 1839, grave doubts were raised, since this was meant a significant loss of government revenue. It was especially pointed out that bar iron was the single most important source of income among the export tariffs and that it could not be allowed to be exported completely duty-free. Hence, at every point when decreased or eliminated tariffs on bar iron exports were suggested and discussed, revenue concerns were present and often prevailed. Revenue from tariffs on exports made up on average 23 percent of total customs revenue, with the figure being the largest during the 1780s and 1790s when specific export tariffs were quite high and domestic export levels were at their peak. As ordinary domestic exports plummeted between 1807 and 1815 so did revenue from export tariffs. There was then a slight pick-up after 1815 as domestic exports increased, but since tariffs were lowered on many exported goods, revenue from these goods were generally lower after 1815 compared to the 1780s and 1790s.

Alcohol here consists of wine, port and spirits such as rum and brandy. Particularly wine was a consistent contributor of significance, averaging a little more than ten percent of total customs revenue per year. Spirits were a more unstable source of revenue, on average seven percent per year, but heavily fluctuating from year to year as import levels also fluctuated. Spirits brought in very little revenue towards the end of the period as import-levels then were very low – perhaps a sign of increased protection of domestic spirits. Wine tariffs may be seen as fiscally motivated throughout the period, rather than protecting domestic beer. Contemporary lawmakers also placed some significance on the import of wine as a source of revenue. It was particularly singled out when export tariffs were lowered, as the state then needed alternate sources of customs revenue.

78 Montgomery (1921b), p. 49.
Salt was a surprisingly significant source of revenue, at least before 1816 when tariffs were decreased. Before 1816 it made up just over 12 percent of total customs revenue on average, while after 1816 it contributed just slightly above 5 percent of the total. Since there was no domestic supply of salt to protect from foreign competition, salt tariffs were probably fiscally motivated. With the supply of salt being steady over the period, high tariffs before 1816 were likely not distortionary for import levels – particularly not as it was meant to be brought in by domestic shipping.80 The favorable trade ties with Spain and Portugal, where most salt was brought from, were at this time stabilized, and a steady supply of salt had been the main determinant in creating those ties, to use Leos Müller’s words.81

Grains contributed quite a lot of revenue when tariff rates were moderate and import levels were high, but naturally the amount of customs revenue fluctuated with the tariff rates and import levels. This all depended on how domestic harvests fared. Here we find the largest amount of customs revenue during the 1780s and 1790s and quite low levels generally between 1800 and 1830. This is in keeping with Åmark’s conclusions that domestic harvests produced more after 1800 than during the 1780s and 1790s. Customs revenue from grains was also at its highest when domestic harvests were at their lowest, in the early 1790s.82 Note that since tariffs on grains could be changed several times a year, the yearly average that has been used here is likely to overestimate the amount of revenue generated certain years, such as in 1827. This is at least the case if we argue along the lines of contemporaries that grain imports should have been highest those months when tariffs were at their lowest – since these tariffs were most often lowered when domestic harvests were not sufficient to satisfy domestic demand. Yearly averages hence obscure such possible monthly fluctuations in the amount of revenue generated.

When tariffs on cotton were increased in 1816 (see figure 5.8), the commodity went from being one of little significance for revenue to being the single largest contributor of customs revenue, bringing in a little more than 20 percent of the total after 1817. It would hence be difficult to argue that cotton tariffs after 1817 were protectionist.

Increasingly common consumption goods during this period such as coffee, sugar and tobacco were also important sources of revenue. Coffee was a fairly reliant revenue good, even though its highest levels occur during the years of the Continental System when import levels were unusually high. Sugar and tobacco contributed throughout the period, but each brought in relatively more


81 Müller (2004).

82 Åmark (1915), p. 10.
revenue after 1816 than before. For tobacco the difference was more than double after 1816 compared to before.

5.5 Summary

This chapter has stressed the importance of looking at the structure of tariffs, why different types of commodities may be taxed differently. It has done so by examining import and export tariffs on a wide range of goods and has attempted to find changes in this structure over time.

The average import tariff between 1783 and 1830 has mainly confirmed earlier statements about Swedish trade policy during the late 18th and early 19th centuries. Ohlin, Heckscher, Montgomery, and Gerentz have all, respectively, highlighted the prevailing protectionist policies where tariffs were generally high and import bans were plentiful. The average import tariff was also very high in the first half of the period and towards the end of it. For a brief period, tariffs measured as ad valorem decreased as prices increased, and specific tariffs decreased when the Navigation Act was temporarily suspended during the Continental System. This is line with Montgomery’s view that liberal policies made a brief appearance during the Napoleonic War, but were almost immediately reversed once the war was over. Even though it is difficult to compare tariff rates with other countries, it seems as if Swedish tariffs were generally slightly higher than the Danish during the period. In terms of Bairoch’s classification of trade policy around Europe in the 1820s, Sweden can be grouped together with countries such as England, France and Austria-Hungary, where prohibitive policies towards manufactures were in place, average tariffs were high, moderate to high agricultural protection existed, and export tariffs were still in use.

Several sectors were protected by high tariffs and import bans for most of the period – domestic producers or refiners of iron, forestry (before 1827), textiles, sugar, tobacco, and beer received significant support from the state by having their domestic markets protected from foreign competition. Tariffs on processed or dyed textiles declined over time, but it is likely that the system of discriminating against foreign fabrics and clothing in favor of those domestically made still remained in effect, as has been previously stated by Gerentz. The protectionism that had been in place since the 1730s was hence still very much the policy of the day by 1820–1830.

Tariffs were, however, not only set for protectionist reasons. I have tried to put emphasis on the fiscal importance that tariffs had and have shown that a couple of tariffs were set mainly out of fiscal concerns. Typically long-distance consumption goods such as coffee, salt, wine, and spirits, but also primary commodities such as sugar and tobacco used by domestic refineries, were taxed highly and contributed a lot to customs revenue over the period. All these goods had few or no domestic equivalents and so were imported in
quite high quantities. As they were also highly taxed, the result was that much customs revenue was brought in on these goods. Just as in England during the same period, a small number of exotic imported goods made up the large bulk of customs revenue, which became the single largest source of tax revenue during the 1810s and 1820s.

The fiscal importance of tariffs was further shown when suggestions came to cut tariffs on several exported goods in 1818. Export tariffs on bar iron, but also on battens, had brought in significant amounts of customs revenue during the 1780s, 1790s and beginning of the 1800s (before exports plummeted). If they were to be cut, they had to be replaced by increased tariffs on certain imported goods, in order not to risk a loss of customs revenue and as a result a loss of tax revenue. An increased fiscal burden was then put on wine, sugar, tobacco, raw cotton, and possibly also on a few agricultural goods during the 1820s to offset the loss of customs revenue from exports. This mirrored the American situation from the 1780s through the first decades of the 19th century, and beyond, where a complete lack of export tariffs put a heavy fiscal burden on import tariffs, which drove up the tariff rates.

In light of this change in tariff structure, I wish to highlight a further point – trade policy during this period came as a package. As shown, tariff were revised only rarely, often with many years in between revisions, but when a revision was carried out, tariffs were changed or adjusted almost across the board. Even when tariff revisions became more commonplace after 1809, being brought up at every ordinary session of parliament, changes were often done in bulk. What I have termed the structure of tariffs seems to have mattered greatly also for contemporary policymakers. If certain tariffs were cut, this could change the whole structure and disrupt the system, especially when tariffs of fiscal importance were concerned. Changes made to one tariff could be important not only just for that single commodity, but also for other tariffs.
CHAPTER 6
Tariffs and Trade – Testing Protectionist Mechanisms

This chapter sets out to test the mechanisms between tariffs and trade, whether there were any distortionary effects mainly from protectionist tariffs. This is of interest since theoretically one of the main effects that protectionist tariffs have is that they change (decrease) the level of imports of those goods that are protected, although they need not necessarily decrease the overall level of imports or trade. The exclusive focus here is on imports, since tariffs on exports generally had little or no protectionist intention or impact. The main concern of protectionism, as well as of mercantilism, is with the impact of tariffs on the country’s own imports, not its exports. Export tariffs may still have had some distortionary effects, but likely not on Sweden’s own imports. The potentially distortionary effect of import tariffs will be tested with a basic time-series model where tariffs are split up into “protectionist”, “fiscal”, and “raw materials” based on the results in the previous chapter and according to the model that was presented in chapter one. There it was argued that classifications can be made based on quantitative assessments of (1) trade level for each commodity; (2) level of tariff rate for each commodity; (3) degree of domestic substitution that each commodity has. Points one and two have been adhered to in full when making the classification in this chapter, based on the data presented in chapters four and five respectively. Complete data on domestic substitution for each commodity are harder to come by, so there assessments have been made when data has been available and when there is ambiguity as to how to classify a certain tariff. Other than these quantitative assessments, a qualitative one has also been made based on how a given commodity might be used – what purpose does it serve in domestic industry (raw cotton for instance) or can it only be classified as a consumption good (coffee for instance).

6.1 Assessing the Distortionary Impact of Tariffs

A test of this sort may be done in several different ways. One way of assessing the impacts of protectionism is to ask counterfactually whether import levels would have been higher under a different tariff structure, for instance
measuring how import levels would have changed if a general augmentation of tariff rates had never occurred. This method was employed by Douglas Irwin when he wanted to test the impact of the rise of protectionism during the Great Depression. Irwin argued that world trade in manufactured goods counterfactually would have fallen by 25 percent during the 1930s compared to the 43 percent it actually fell, if world production had remained the same. He argued somewhat speculatively based on quite a simple model that up to 40 percent of this possible counterfactual difference could be attributed to higher trade barriers (not only tariffs, but also quotas and other policy instruments). It should, however, be stressed that most hikes in tariff rates in much of the Western world during the Great Depression were done to decrease the general level of imports in order to improve the balance of trade and the balance of payments, not to further domestic import-competing sectors. As mentioned, this was, however, quite a simple linear model which did not take into account any other factors than production and trade obstacles. It would still be possible to make similar counterfactual arguments about the impact of tariffs on import levels, by actually testing the possible effect of different groups of tariffs alongside other important factors.

The basis for the division of tariffs into three subgroups is found in the model in chapter one. Some repetition and further discussion is, however, necessary before progressing any further. First, separating “revenue” tariffs from the other groups is derived from the Nye/Irwin-debate and Tena-Junguito’s continued discussion on the nature of these “fiscal” tariffs. As was discussed in chapter one, these types of goods have usually been taxed for the explicit purpose of raising revenue, have much smaller elasticity of demand and hence not the same impact on welfare and import substitution as protective tariffs. It also seems as if revenue tariffs have been of a different level than other tariffs in several European countries, meaning that separating them from protective tariffs might yield other results in significant ways. This was also a significant part of the tariff growth debate, where Irwin and Tena-Junguito stressed that a division between different types of tariffs is necessary. Earlier results indicating a correlation between protectionist tariffs and growth during the late 19th and early 20th centuries could have been spurious and driven instead by fiscal tariffs, which were also very high in several Western countries.

In figure 6.1 I have compared the average import tariff (see figure 5.4) and an average import tariff where fiscal tariffs have been removed to see if Tena-Junguito’s hypothesis that the average tariff level generally would be lower if fiscal tariffs were not included or were at a lower level.

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1 Irwin (2012), p. 106.  
3 Irwin (2002); Tena-Junguito (2009).
The Swedish case between 1783 and 1830 does not seem to confirm Tena-Junguito’s hypothesis. The average tariff without fiscal tariffs was lower only between 1800 and 1812 and then only by a few percentage points. This likely means two main things: (1) fiscal tariffs were not set at significantly higher levels than other tariffs; (2) it was probably high protectionist tariffs that pulled the average tariff upwards the most. Figure 6.2 which compares fiscal and protectionist tariffs in essence confirms this. A further explanation is that in the period that Tena-Junguito was researching, post-1840, most countries probably had a different tariff structure than before 1830. After 1840, and especially after 1850, most countries in Europe had cut their tariff rates and the tariffs which remained were usually fiscal in nature, for instance set on long-distance consumption goods with little or no domestic equivalents. Nonetheless, despite the small difference in level between the average import tariff with or without fiscal tariffs, I would argue that there could still be reasons to separate fiscal tariffs from the average and from protectionist tariffs, due to their different impact on trade, economic growth, and welfare.

This way of dividing or classifying tariffs into subgroups, instead of using one average tariff that does not distinguish between the possible impact of different types of duties, was used by Lehmann and O’Rourke in their exploration of the relationship between tariff rates and economic growth in ten Western countries between 1875 and 1913. There revenue tariffs were equated with “exotic” imports, such as coffee, tea, tobacco, pepper and other...
spices, fruits, etc. (certain differences existed between countries). The other two categories in their tariff structure were agriculture and manufacturing (industry), a division which makes sense when economic growth is the dependent variable, since these two broad categories were generally the two growth engines of the late 19th century. In the study, an “exotic” import such as sugar was labelled as protecting agriculture, while tariffs for beer and spirits were put into the manufacture subcategory (as protecting domestic production of beer and spirits). Following the Nye/Irwin debate, the tariff on wine could move between categories depending upon which position one wanted to take. In one of Lehmann and O’Rourke’s models, wine was regarded as a revenue tariff (“exotic”) in countries that were not wine-producers, while it was defined as agricultural protection in wine-producing countries. In the second model, wine was included with beer and spirits in the manufacturing category even for countries not producing wine (such as Sweden), meaning it was not included in the revenue category at all.

This raises a few important questions for my aim to divide tariffs into the subcategories “protectionist”, “fiscal” or “raw materials”. The first is whether my specification should follow Lehmann and O’Rourke and not regard the tariff on sugar as fiscal. As shown in the previous chapter, raw sugar was, however, a fiscally important import throughout the period. In having little or no domestic equivalent, it would be difficult to regard it as protectionist. This is something which should be emphasized as a difference between a study that revolves around the late 18th and early 19th centuries compared to studies focused on the late 19th and early 20th centuries (such as Lehman and O’Rourke’s) when there was domestic production of raw sugar in Europe on a much larger and geographically widespread scale than during the early 19th century. The question arises rather whether to regard sugar, and tobacco, as inputs, as they both were used extensively by domestic refineries. Here previous research gives little guidance, except for when a commodity could be included into more than one category. It is then possible to elaborate with multiple models depending on specification. In the first model I will regard sugar and tobacco as “fiscal” since they brought in significant revenue and, compared to most other inputs, had a fairly high tariff over the period. Lehmann and O’Rourke also had some difficulties regarding whether to label levies on raw cotton (and raw silk) as a revenue or agricultural tariff. This issue also arises in my model since raw cotton was shown to become a significant revenue good during the 1820s, while being an input of no or very small fiscal significance during the earlier part of the period. Due to the fact that cotton continued to be used as an input throughout the period, but was fiscally significant only for a few years


towards the end, I have chosen to include it among “raw materials”. As shown by the Nye/Irwin controversy in chapter one and the study by Lehmann and O’Rourke, there are also some difficulties arising as to how to classify certain alcohols. Beer is pretty straightforward for Sweden since it was insignificant in terms of revenue and had a very high level of protection and domestic substitution. Wine and spirits (rum and brandy) are a bit more difficult to categorize. A Nye-model would assign both to the protectionist category since they both can be said to have protected the domestic production of beer and spirits. An Irwin-model would, on the other hand, argue that at least the tariff on wine was not protective since Sweden had no domestic production of wine to shelter from foreign competition. Irwin would also point to the fact that wine had some revenue significance during the period. One problem is that the fiscal importance of both wine and spirits decreased after 1815 as import volumes went down. It could hence be argued that the tariffs on these goods had more of a protectionist effect during the final 15 years of the period. In the first model wine and spirits will, however, be assigned to the fiscal subgroup, while the tariff on beer is categorized as protective. It would be possible to make certain moderations to this in other regression models.

As implied in chapter one when outlining the model for classification, there will be commodities that undoubtedly fall between the cracks here. How does one categorize commodities such as grains and certain other foodstuffs (dairy, meats, possibly potatoes) which cannot naturally be placed any of the three subgroups? There was increased protection of dairy, beef and potatoes after 1815, but each were subject to a low to moderate level of protection before that. One could somewhat sloppily assign them to the raw materials category, since they can be seen as primary consumption commodities. Another solution, albeit an unsatisfactory one, is to leave them completely out of the model. A way to easily escape the problem would be to create a fourth category, consisting of foodstuffs and/or agricultural tariffs. I have, however, decided to include them in the categories that are already available here. Grains will be regarded as a raw material since tariff rates were low to moderate throughout most of the period and the regulation of the grain trade usually served other purposes than protectionist, i.e. to adjust for shortages or abundances in domestic harvests. Tariffs on dairy, beef and potatoes, on the other hand, did in some way shelter domestic substitutes, although protection was moderate before 1815. These goods will hence be assigned to the protectionist subgroup.

A categorization of all the tariffs is starting to crystalize. Fiscal tariffs will be those on mostly “exotic” imports such as coffee, tea, tobacco, salt, sugar, pepper, wine and spirits. Protectionist tariffs are those on textile manufactures, iron and steel, forestry other than simple inputs, and the agricultural goods mentioned above. This category is an attempt to isolate those duties that should

6 If one also disregards whether domestic excise taxes offset any differences between foreign and domestic types of alcoholic drinks.

7 See Åmark (1915).
theoretically have had a distortionary impact on trade. Raw materials are textile raw materials, grains, pit coal, oak and unprocessed wood, unprocessed lead, unprocessed tin, etc. For the full description of which commodities are included in each category, I refer the reader to appendix D. Figure 6.2 displays the average unweighted tariff for these three categories.

As expected the protectionist tariffs were highest almost throughout the period, although they are at their highest in the beginning and towards the end. Fiscal tariffs generally decreased over time, with especially the duties on salt and tea being lower during the 1820s than before. Raw materials were at a low level below ten percent ad valorem the entire period, with a certain increase after 1824 as especially the rates on grains, pit coal and raw cotton were increased. This clearly displays the tendency in Swedish trade policy during this period to differentiate tariffs between commodities based on degree of refinement – setting low tariffs on raw materials and higher tariffs on finished products and manufactures. These categorizations will now be measured against import levels to try to see any discernable impact of the Swedish tariff structure on the flow of trade.

Theoretically the three subgroups should have different impacts on average import levels. Increasing protectionist tariffs would likely mean a decrease in imports, since the aim of those tariffs was to be distortionary to the import of goods that competed with domestic production. Increasing tariffs on raw materials could potentially also decrease imports since (1) increasing tariffs on inputs increases costs for domestic producers; (2) increasing tariffs on primary commodities such as consumption goods increases the prices of the goods

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Figure 6.2 Ad valorem Import Tariffs by Category 1783–1830

Source: Kongliga placater, resolut, förordningar och påbud, 1782, 1794, 1799, 1816, 1824; Svensk författningssamling, 1826; Jacobs & Richter (1935); Posthumus (1946); Jörberg (1972); Clark (2004).
and hence the cost for domestic consumers. Increasing tariffs on fiscal goods might, however, not be distortionary to trade, at least not when it increases on goods that have a low elasticity of demand – the consumption of these goods are not particularly affected by increasing prices. This has been observed with alcohol, but for the period in question here also with coffee and tobacco, and possibly salt.

6.2 Specifying a Model
Tariffs are not the only form of domestic distortion of international trade – one might also need to take into account different forms of subsidies, both on the producer and consumer sides of goods. However, because of the lack of complete information in this case and the mathematical complexity needed to perform such exercises, alternative measures are needed.

Here, the three subgroups or categories of tariff rates will each be used as an independent variable in a time series Ordinary Least Squares (OLS) analysis alongside a few control variables that might have an impact on import levels. The dependent variable is the aggregate import level, which has been deflated using an import price index as was described in chapter four. The starting year for the regression has been moved up to 1783, since that is the year from which I have tariff data.

In terms of necessary independent variables, other than the tariff rates, I have decided to use British exports as a proxy for international productivity or industrial output (which theoretically should affect Swedish import levels). Using Britain as a sole proxy is not unproblematic, but the most useful since: 1) it was the world’s leading economic nation at the time (in competition with France); 2) it was Sweden’s single most important trading partner; 3) export data is available for the entire period in question here. An increase in British exports should have had a positive effect on Swedish imports, particularly since Britain re-exported much of the colonial goods (coffee, tea, tobacco, etc.) that Sweden imported. In order to take into account the relative value of the Swedish currency, I have constructed an index consisting of the unweighted (for want of complete data on the relative trade weights of each trading partner) average of the Swedish currency in relation to the Hamburg banco, the British pound, the French franc, and the Dutch rijksdaalder. These four meet the criteria of having complete data for this period and being four of the major import sources for Sweden. Theoretically, a weaker Swedish currency should have had a positive effect on imports since they relatively speaking

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would have become cheaper. An increase in this index is an indication of a weaker Swedish currency.\(^{10}\) Since the possibility to transport goods has always been key for the flow of trade, I wanted to include a variable which in some way reflected transport capacity. Here I have made use of Swedish shipping statistics, more specifically the number of ships registered in the major ports. The rationale here is that a larger shipping capacity would increase the possibility to import. A reason for choosing Swedish shipping capacity instead of foreign in that the basis for Swedish shipping policy was that domestic vessels should be favored over foreign, and so the majority of Swedish foreign trade was carried out using Swedish ships.\(^{11}\) As a proxy for domestic demand, I have included a variable for wages, namely day laborers’ wages.\(^{12}\) I have used the unweighted national yearly average for these wages and have then deflated with Swedish CPI (see chapter three) to create an index of real wages. Increasing real wages over time should have resulted in an increased demand for imports, particularly of foodstuffs and other consumption goods, or vice versa if real wages declined. I have included another variable to check for domestic demand, which is population growth. Like wages, an increasing population should have meant increased demand for imports, mostly in foodstuffs, but possibly also in textiles.\(^{13}\)

A dummy variable has been used to check for the effect of warfare on import levels. It has been the stated that the Napoleonic War (1803–1814) with its economic warfare in the form of trade blockades between England and France heavily affected and restricted the flow of trade in Europe (see chapter two). The dummy variable is set to 1 between 1803 and 1814 (war) and to 0 for all other years (peace). The French Revolutionary War (1793–1802) is hence treated as a time of peace here, since it did not entail extensive and institutionalized economic warfare. Also, warfare itself was more modest than during the Napoleonic War.

We then have a simple time series OLS model which can be tested. The specified model is as follows:

\[
\text{Real-import} = c + \beta_1 \text{protec} + \beta_2 \text{fiscal} + \beta_3 \text{raw} + \beta_4 \text{brexp} + \beta_5 \text{rate} + \beta_6 \text{ship} + \beta_7 \text{wage} + \beta_8 \text{population} + \beta_9 \text{war} \epsilon
\]

where “c” is the constant followed by the independent variables protectionist tariffs, fiscal tariffs, tariffs on raw materials, British exports, exchange rates, Swedish shipping capacity, real wages, population, the war-dummy, and “\(\epsilon\)” is the error term (residual).


\(^{11}\) Swedish shipping statistics from Müller (2004) and Mitchell (1975). Missing years have been linearly interpolated.

\(^{12}\) Figures from Jörberg (1972).

\(^{13}\) Population figures from SCB (1969).
6.3 The Test

In order to avoid non-stationarity, meaning that each variable’s series contains a natural trend, I have used the logarithmic form of each variable that is not already an index or expresses changes in percent (the tariff variables, exchange rate, population, and wages). If a series is not stationary, it cannot be included in the model since the significance of the coefficients could be corrupted and rendered untrustworthy. Table 6.1 reports the regression results from the first model.

The variable for the protectionist group of tariffs is of the expected negative sign, but shows a very small impact on average import levels. However, the coefficient is not significant at any of the critical confidence levels, not even at the lowest 90 percent level. This means that we cannot really say anything about the possible impact, negative or positive, of protectionist tariffs at all. The model simply does not contain any reliable information regarding that variable, which is also shown by the very large standard error of the coefficient seen in the middle column. The fiscal tariffs have a rather small impact on imports and are not significant at any of the critical confidence levels. This

Table 6.1 Regression Results for Model 1

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</tr>
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</table>

OBSERVATIONS 48

R² 0.585152
Adj R² 0.486898
S.E of regr 0.230985

*** = significant at 99 percent confidence level
** = significant at 95 percent confidence level
* = significant at 90 percent confidence level
could be explained by the fact that tariffs rarely have a great impact on the trade level of goods whose demand is usually inelastic, which is the case with many of goods assigned as “fiscal”. It could then be expected that fiscal tariffs would not have any distortionary impact at all, but rather a fiscal effect, as tariffs and trade changes over time. The tariffs on raw materials are interestingly enough significant at the 95 percent confidence level, but have a positive sign – meaning that increasing tariffs on these goods would mean increasing imports. This is quite contrary to theoretical expectations, and the positive impact is on the order of close to a 0.8 percent increase in imports for each percentage points increase in the average tariff on raw materials. British exports, Swedish shipping, exchange rates and wages all have the expected respective signs, but not one of the variables is significant at any of the critical levels. The population variable is significant at the 95-percent confidence level, but rather than having the expected positive impact, it has a slight negative impact instead. The war-dummy has quite a large impact on imports – going from peace to war entails an increase in imports of nearly four percent. Considering the big spike in imports during the Napoleonic Wars (see chapter four), this positive impact is not surprising, but the statistical significance is interesting. The question is why the model yields this result (or non-result in the case of the protectionist tariffs)?

Another model was tested where the fiscal tariffs had been completely removed, in that they might correlate with the other tariff variables, particularly the protectionist tariffs, and hence distort the coefficients. Table 6.2 however shows, however, very little changes in the results between model 1 and model 2. The raw materials tariffs variable has a lower impact than before, but is still statistically significant. Most importantly, protectionist tariffs do not show any statistically significant impact here and the possible impact of the coefficient is in any case very small. The two models perform about the same, as indicated by the small difference between them in adjusted r² and standard error of regression.

Several other models were tested, removing certain variables, and logging and lagging existing variables, and none yielded a statistically significant impact for the protectionist tariffs on average import levels. Lagging the protectionist variable by one year, on the assumption that tariffs might affect imports only when they have been in effect for some time, did not yield any different result either. Does this mean that protectionism had no impact on trade in practice? First of all, one could argue that protectionist tariffs would not affect imports on the aggregate level, but rather only those goods which were explicitly protected. Secondly, these models do not take into account the fact that there is likely a difference between tariff hikes. Going from zero to ten percent ad valorem likely has a much smaller protectionist impact than say going from 30 to 40 percent ad valorem. This could explain why an increase in tariffs on inputs rather than decreased the total level of imports had a statistically positive impact. A tariff that is increased from zero to ten
percent ad valorem likely does not decrease import levels, and thus has more of a fiscal than protectionist effect. This is the case since static import levels with higher tariffs than before yield higher revenue. Section 6.4 will continue discussing these two points by drawing together evidence from chapter four and chapter five.

6.4 Possible Impact of Tariffs on Trade

While the statistical exercises in section 6.3 yielded little information about the possible impact of the structure of Swedish tariffs on Swedish foreign trade, some sectorial evidence might provide more convincing answers.

As already mentioned, the degree of import penetration among the goods classified as being protected by high tariffs was very low between 1780 and 1830. Figure 4.7 in chapter four showed clearly that two of the more highly protected export sectors, forestry and metal, had low levels of imports. More to the point, those goods that were imported at all in these categories were raw materials such as unprocessed lead, unprocessed tin, and unprocessed wood, which as we saw in chapter five had very low tariffs and could not be considered as being protected. The specific goods which were indeed protected, such as bar iron, iron manufactures, battens and timber, had close

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</table>

*** = significant at 99 percent confidence level
** = significant at 95 percent confidence level
* = significant at 90 percent confidence level
to zero imports. The only exception to this rule was tar, which saw increasing import levels after 1823, of some 10,000 barrels per year on average up until 1830. The protectionist tariff on this commodity was also relieved after 1827, a further indication of the increased need for tar imports. It is unlikely that this had anything to with a shift towards more liberal trade policies, but everything to do with the simple fact that as a result of the loss of Finland tar production in the aggregate decreased. Production from Sweden proper was likely not enough to satisfy domestic demand after 1809. Despite this exception to the rule, protected goods can be said to have been effectively protected in the sense that the degree of import penetration for these goods was next to nothing. One important question that can be raised from this is whether this was a result of the tariffs themselves, or rather a result of the fact that most of these protected goods also were subject to import bans? The import bans were in the form of highly protectionist tariffs in the tariff code often of 50 or even 100 percent ad valorem, as shown in chapter five, but it is likely that the import ban itself had a larger protectionist impact than the actual tariff rate. Since a license was needed in order to be able import a good that was on the list of prohibited imports, a further cost was placed on top of that of the protectionist tariff. This cost was likely not foremost economical, but political, as one can imagine that the possibility of ever being able to receive a license to import a good such as bar iron must have been very low. As bar iron was the single most important export commodity throughout this period, one would have to create an alternate history to imagine that the authoritative state of the Gustavian Era would grant such a license allowing the import of the good, particularly from a competitor such as Russia. An argument can hence be made that protectionist tariffs carried their prohibitive weight, but it is plausible that that impact worked mostly through the import bans, which were in place for most metals and forestry goods (in forestry before 1827 at least), as well as processed textiles. One can hypothesize that an import ban would be a more prohibitive trade policy tool than a protectionist tariff.14

This argument works plausibly for goods with static protectionist tariffs that carry low to zero import penetration over an entire period. But how do we assess the impact of protectionist tariffs on trade when either the tariff rate or the degree of import penetration changes over time? Thankfully we here have a number of goods where the tariff became more protectionist over time, so it is possible to assess whether that switch to protectionism also resulted in lower degrees of import-penetration. In essence, did the protectionist tariffs do what they were set out to do?

14 One could imagine that this point could be proven statistically by trying to assess the impact of protectionist tariffs compared to the impact by import bans expressed as tariffs on just those goods that were protected by those tariffs, but considering that there would then be very little variation in the dependent variable – as the import levels of protected goods were more or less zero throughout the period – such a test would likely not yield any more convincing evidence than the argument just outlined.
The eight goods where the tariff rate increased substantially over time were: beef, pork, cheese, butter, grains, cotton, raw flax, and pit coal. Figures 6.3 through 6.10 will show the development of the ad valorem tariff as well as the import levels in constant prices for these eight goods in order to compare the degrees of protectionism and import penetration.

The cheese tariff (figure 6.3) was set at a prohibitive level in 1825 after being at moderate levels throughout the period. Imports were generally lower during the 1820s than they had been between 1783 and 1806 – but not as low as the dip during the years of the Napoleonic War when import levels plummeted. It is possible that the high cheese tariff after 1825 had some import-substitution effects, but this is not clear in the short run.

Interestingly enough the tariff on butter (figure 6.4) was generally at low levels, around five percent, when imports were also low. The tariff hike in 1825 up to 50 percent ad valorem on the other hand seems to have had little or no impact on the degree of import penetration, which became rather high towards the end of the period compared to earlier levels.

The import of beef (figure 6.5) was generally low compared to that of other agricultural goods such as dairy, grains and tallow, so Sweden was quite self-sufficient with regard to meat during this period. One could imagine that the move to set the tariff at 50 percent in 1825 was a move towards import substitution. This plausible argument is, however, clouded by the fact that beef imports were higher after 1819 than they had been earlier. True, there is a dip after 1825 which might be attributed to the prohibitive tariff, but that would still not explain why levels remained comparatively high.

Source: see chapters four and five.
Just as with beef, the need for imported pork (figure 6.6) was generally low. The tariff was likewise set at 50 percent ad valorem in 1825, but it seems to have had little or no impact on the degree of import penetration. If anything, pork imports were higher during the 1820s compared to earlier decades, even if we disregard the particular peak in 1825.

As mentioned both in chapter four and chapter five, both the import volume and tariff on grains (figure 6.7) fluctuated quite heavily from year to year.
– both factors that were dependent on how domestic harvests fared. Grain tariffs were usually kept low when the need for imports was big, and vice-versa, which figure 6.7 seems to confirm. While the yearly data used here does not follow the actual month-to-month changes in the grain tariffs, it still gives a good picture of how tariffs and import levels co-existed. Except for a few years, imports were high when tariffs were low and vice-versa. The question is whether the somewhat prohibitive tariff adopted in 1821 (with the

Figure 6.7 Ad valorem Tariff (right axis) and Import in Constant 1800 Prices (000’s riksdaler) of Grains, 1783–1830

Source: see chapters four and five.
exception of the years 1825 and 1826) could indicate import substitution or protectionism? It does seem to have coincided with low import levels during the 1820s. As we saw in chapter five, this was likely an outcome of rapidly increasing production figures within Swedish agriculture.

Raw flax (figure 6.8) was one of the larger Swedish textile imports during this period and played an important role in domestic manufactures. Import levels fluctuated a bit during the first half of the period, but were on average quite high. The tariff was generally very low, below five percent ad valorem, but was in one swift move set at 30 percent in 1825. As we could see in chapter five, the tariff code had earlier distinguished between raw and finished flax, but from 1825 this differentiation was completely removed. The import levels of raw flax also decreased substantially during the 1820s, but it seems as if this preceded the tariff hike by a few years. The move to increase the tariff could be seen as a way of cementing an import substitution that was already underway and as an effort to try to keep the import dependency at low levels.

Raw cotton (figure 6.9) was another key textile import, even though the imported value generally was lower than for raw flax. The cotton tariff was kept at low levels through most of the period, even at close to zero between 1806 and 1814 when the Navigation Act was temporarily suspended. In 1825 the tariff was increased to 15 percent ad valorem and rose even further with the revision taking effect in 1827. The cotton tariff was then at a similar level as the flax tariff, but it was not followed by decreasing import levels. The second half of the 1820s rather saw an increase in imports. An effect of this was discussed in chapter five where it was reported that customs revenue from raw cotton increased substantially after 1825. It would hence be difficult to argue that the post-1825 tariff had any import substitution or protectionist impact.

Figure 6.8 Ad valorem Tariff (right axis) and Import in Constant 1800 Prices (000’s riksdaler) of Raw Flax, 1783–1830

Source: see chapters four and five.
Note that the extreme peak in import levels between 1809 and 1811 can be attributed to the circumvention of the trade blockades of the Napoleonic Wars.

Towards the end of chapter five, pit coal (figure 6.10) was singled out as a plausible example of protecting a young industry, an import substitution policy – it was at least described as such by the government. After 1816 the tariff was increased in two steps, where the second in 1825 set it at 25 percent ad valorem. Import levels were generally lower towards the end of the period,

Source: see chapters four and five.

Figure 6.9 Ad valorem Tariff (right axis) and Import in Constant 1800 Prices (000’s riksdaler) of Raw Cotton, 1783–1830

Source: see chapters four and five.

Figure 6.10 Ad valorem Tariff (right axis) and Import in Constant 1800 Prices (000’s riksdaler) of Pit Coal, 1783–1830

Source: see chapters four and five.
so there is some indication that the policy had started to take effect on the degree of import penetration from 1817 and onwards.

There is no one decided conclusion to be drawn about the plausible impact of these eight tariff increases on import levels – it mostly seems as if they affected different goods in different ways. We can at least try to make an estimate the effect of the change in tariff structure during this period. Figure 6.11 shows the aggregate import level and average tariff for these eight goods. A more disaggregated model than earlier will then be tested to see whether any statistical impact of these tariffs on the degree of import penetration can be discerned.

As can be seen, the collected import level for the eight goods decreased quite substantially towards the end of the period, while the average tariff increased notably, particularly from 1825 and onwards. The fluctuating import levels are an indication that grain imports may have lay behind much of the aggregate trend; for the largest part of the period grains were a larger import than the other seven goods combined. Figure 6.12 therefore shows the same data, but without grains. A second disaggregated model without grains will also be tested.

The results regarding higher tariffs and lower import levels are less clear-cut once grains are removed from the equation. There could also be a reason to remove cotton from the equation, since it is such an outlier with the short spike in imports between 1809 and 1811, as well as having a tariff which after 1817 was mostly driven by revenue concerns. A third model will therefore be tested where both grains and cottons have been removed.

Figure 6.11 Average Ad valorem Tariff (right axis) and Aggregate Import-levels in Constant 1800 Prices (000’s riksdaler) for Eight Selected Commodities, 1783–1830

Source: see chapters four and five.
6.5 Disaggregated Tests

Basically the same model specification will be used as in section 6.3 – with the differences that “imports” now include only the goods as specified and tariffs include only those goods that are in the import variable. The division of the tariff variables into “protectionist”, “fiscal” and “raw materials” is hence not used here. Otherwise the same control variables as in section 6.3 have been used (table 6.3).

The tariff variable is significant here at the 90-percent confidence level, but it is not of the expected sign. Here increasing tariffs show a positive impact on import levels, rather than the other way around. Equally so, the population variable shows an unexpected sign, where it seems as if an increase in population would have had a negative impact on import levels rather than vice-versa.

As mentioned earlier, model 2 (table 6.4) is the same test, but this time without grains among the import and tariff variables, based on the possibility that the fluctuation in grain imports and tariff may have been the major factor behind the results.

Model 2 again shows an unexpected positive sign for the tariff variable, even though it now is not significant at any of the critical confidence levels. The only variable showing significance at any of the critical confidence levels is the shipping variable, but that is also of the “wrong” sign – here meaning that greater Swedish shipping capacity would have meant a large decrease in

Figure 6.12 Average Ad valorem Tariff (right axis) and Aggregate Import-levels in Constant 1800 Prices (000’s riksdaler) for Seven Selected Commodities, 1783–1830

Source: see chapters four and five.
Table 6.3 *Disaggregated Regression Results for Model 1*

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R² = 0.656031
Adj R² = 0.595837
S.E of regr = 0.659917

*** = significant at 99 percent confidence level
** = significant at 95 percent confidence level
* = significant at 90 percent confidence level

Table 6.4 *Disaggregated Regression Results for Model 2*

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R² = 0.313446
Adj R² = 0.193299
S.E of regr = 0.314609

*** = significant at 99 percent confidence level
** = significant at 95 percent confidence level
* = significant at 90 percent confidence level
imports. As indicated by the major drop in adjusted $r^2$ compared to model 1, model 2 also performs much worse overall.

Model 3, where both grains and cotton have been left out, also shows a positive, but not critically significant sign for the tariff variable (table 6.5). Lagging the tariff variable by one year, given that changes in tariffs could have an effect on import levels only after they have been in place for some time, could be one solution, but when this was tried for all three models, the results for the tariff variable did not change at all.

There thus seems to be very little statistical evidence that tariffs that increased over time had any significant distortionary impact on import levels, even when disaggregated models containing only between six and eight goods were tested. The question is why? A first possible answer is statistical – it cannot be ruled out the models tested here suffer from faulty specifications; it could be that they simply have not performed very well. One could raise the question whether a simple linear OLS-regression is the suitable way to test the impact of tariffs on imports. Another is whether the variables should have been differentiated, meaning that they would measure change in percent year by year. I would, however, argue that that would only take into account the change in tariffs over time, and not fully test the levels of the tariffs – something that is critical for the possible impact on import levels. A more analytical answer would be that even at this disaggregated level, there were simply so few goods where tariffs could be associated with decreasing import levels.

Table 6.5 *Disaggregated Regression Results for Model 3*

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$R^2$ = 0.617830

Adj $R^2$ = 0.550950

S.E of regr = 0.268763

*** = significant at 99 percent confidence level

** = significant at 95 percent confidence level

* = significant at 90 percent confidence level

imports. As indicated by the major drop in adjusted $r^2$ compared to model 1, model 2 also performs much worse overall.

Model 3, where both grains and cotton have been left out, also shows a positive, but not critically significant sign for the tariff variable (table 6.5). Lagging the tariff variable by one year, given that changes in tariffs could have an effect on import levels only after they have been in place for some time, could be one solution, but when this was tried for all three models, the results for the tariff variable did not change at all.

There thus seems to be very little statistical evidence that tariffs that increased over time had any significant distortionary impact on import levels, even when disaggregated models containing only between six and eight goods were tested. The question is why? A first possible answer is statistical – it cannot be ruled out the models tested here suffer from faulty specifications; it could be that they simply have not performed very well. One could raise the question whether a simple linear OLS-regression is the suitable way to test the impact of tariffs on imports. Another is whether the variables should have been differentiated, meaning that they would measure change in percent year by year. I would, however, argue that that would only take into account the change in tariffs over time, and not fully test the levels of the tariffs – something that is critical for the possible impact on import levels. A more analytical answer would be that even at this disaggregated level, there were simply so few goods where tariffs could be associated with decreasing import levels.
We could see this mostly for grains, where the need for imports was replaced by an export surplus, resulting from more successful harvests than before. Imports went down for raw flax, pit coal and cheese towards the end of the period when the tariffs for these goods were increased. But for goods such as cotton, butter, beef, and pork, imports rose as the tariff was increased after 1825. Hence, even at the disaggregated level, there is evidence for there being import substitution policies in practice only for a few goods – grains, raw flax, pit coal and cheese. For the other four goods, cotton, butter, beef, and pork, the tariff hike of 1825 had instead a fiscal effect, as was particularly shown for cotton and butter in chapter five. A further possibility concerns time period in question here – that the tariff increases which went into effect only after 1825 came too late to be able to show a significant statistical impact. In order to fully assess the possible distortionary nature of these tariffs and their import substitution impact, the time frame would have had to be extended, at least up until 1840. There was simply not enough time and data between 1825 and 1830 to reach conclusive answers about the possibility of import substitution practices in a longer run.

6.6 Summary
This chapter has tried to identify whether the structure of Swedish tariffs had any impact on the flow of trade; specifically if there were any distortionary effect of tariffs on imports. In order to isolate the impact of different kinds of tariffs, they were split up into “protectionist”, “fiscal” and “raw materials” according to the model presented in chapter one and based on the results from chapter five. These subgroups of tariffs were then used as independent variables in a time series OLS regression analysis to determine their possible impact on imports. On the aggregate level, no significant impact of protectionist tariffs on trade could be shown. In essence this can be explained by the fact that the goods which had the highest protectionist tariffs virtually had zero import penetration, a fact that a statistical test on the aggregate level would hide rather than reveal.

Therefore the impact of tariffs on imports was tested on a more disaggregated level, where eight goods whose tariffs increased substantially over time were singled out. Descriptive statistics showed some indication that tariffs had import substitution, import distorting, effects in practice, but this could not be verified by regressions on any disaggregated level. This can be explained by the likelihood that increased tariffs after 1825 coincided with decreasing import levels on only a small number of goods and that the impact on other goods was fiscal more than anything else.

The question “were Swedish tariffs not only protectionist in the intention of policymakers, but also in practice” can then be answered with a cautious “yes”. The question “how protectionist were Swedish tariffs” is, however,
left hanging with a more inconclusive result. Evidence beyond the purely statistical would, however, point towards a high level of restrictiveness in these tariffs since those goods that were the most protected throughout the period, such as iron, had a degree of import penetration that was virtually zero. The question of whether tariff increases on goods which had carried some import weight were also distortionary in practice is also left with a somewhat inconclusive result.
CHAPTER 7
Concluding Analysis

Why are restrictions put on foreign trade? Despite the theoretical and ideological allure of free trade, considerable obstacles to international trade in the form of tariffs have been in effect during the last couple of hundred years. This was a preferred trade policy instrument in the pre-industrial and industrial era alike, while losing some significance beginning in the early 1900s, and increasingly so during the second half of the century. Protectionism in different forms (infant industry, import substitution, etc.) has, to paraphrase Paul Bairoch, generally been the rule historically, while free trade has been the exception.

Trade policy and the structure of tariffs reflect economic structure at the national level to quite a high degree. They may also reflect prevailing economic interests which come in a variety of shapes and forms. The fiscal interests of the state may collide with the infant industry interests of manufacturers and industrialists for instance. As such, trade policy can be seen as an indication of political economy intentions.

This dissertation has sought to answer the question: what characterized Swedish trade policy during the half-century between 1780 and 1830 we can call the late pre-industrial era. Was protectionism as prevalent as previous research has claimed or were there also other features of trade policy? It has done so by investigating the structure of tariffs, the tax set on exports and imports, to see how different types of commodities were taxed and how there may have been differences between groups of commodities. An additional research question has been to track how this structure of tariffs may have changed over time. This dissertation has also sought to investigate some of the plausible practical impact of tariffs – did they really distort trade as they were intended to do? Were Swedish tariffs protectionist not only in intent, but also in practice?

Tariffs as an operationalization of Swedish trade policy have been researched before, mostly by Eli Heckscher and Arthur Montgomery in their respective works. Neither of the two scholars, nor anyone else for that matter, quantified the tariffs in a way that the primary source material allows for. This dissertation has measured Swedish tariffs as ad valorem, quantifying tariffs as a percentage of the price of each commodity, something which has not been done before with Swedish tariffs during the period 1780 to 1830. By creating an operationalization of trade policy, with data and series that are coherent and
unitary over time, and comparable across commodities and between countries, this dissertation has sought to shine more and possibly new light on Swedish trade policy in the pre-industrial era.

Focusing the analysis on this half-century has made it possible to take into account plausibly important international and domestic factors which might have affected Swedish trade policy. Here the greatest emphasis has been put on the trade distortion caused by the blockades between England and France during the Napoleonic Wars, as well as the change in political structure brought about by the adoption of a new Swedish constitution in 1809. By combining an inward and outward looking analysis, this dissertation has sought to highlight certain factors affecting Swedish trade policy in a way that has not been explicitly done before.

7.1 Swedish Trade Policy in a Domestic Perspective
Traditionally, Swedish trade policy from the early 18th century until the middle of the 19th century has been described as mercantilist, with the domestic production of mostly iron and textiles, but also sugar-refining, heavily protected by high tariffs and numerous import bans. These policies over the late 18th and early 19th centuries have also been seen as inflexible and rigid, with little change in the reigning doctrines and practices.

While it is true that the protectionist foundations and restrictive content of Swedish trade policy were not really changed between 1780 and 1830, as mostly Heckscher has maintained, there is reason to believe that certain things did change. Both chapter three and chapter five in this thesis have shown that as the authoritarian structure of Swedish politics changed after 1809, so did trade policy, increasingly becoming an area where more interests than before could now be heard.

As shown in chapter five, the average import tariff fell quite substantially between 1800 and 1815, mostly as a result of rapidly increasing prices and unchanged or even lowered specific tariffs. While this was not necessarily an indication of clear liberal intentions, it was certainly the case that the restrictiveness of trade policy lessened somewhat during this period. This is evident not only in the average import tariff, but also across several commodity categories. The “tariff burden” relative to the price of the commodities did decrease, something which has not been shown empirically before. This result would give Arthur Montgomery’s view that the time of the Napoleonic Wars was characterized by more liberal tendencies at least certain empirical backing. It is a contrast to those descriptions of Swedish trade policy as being completely inflexible and rigid during this period. It is not the intention in this study to fully investigate whether this tariff relief was conscious policy or not, but it can be noted that the temporary dismantling of the Navigation Act, which in effect decreased tariff rates, coincided with increasing import
prices as well as a trade warfare to which Sweden tried to remain neutral. Staffan Högberg has shown how the National Board of Trade already in 1801 recognized that Sweden’s position relative to the belligerents was beneficial and how this was argued from a “preparedness point of view.”\textsuperscript{1} Relieving the restrictiveness of Swedish trade policy during the remainder of the war may be seen in this light as an active policy choice.

Nonetheless, despite the brief breakthrough for lower tariffs during the early 1800s, overall they remained high during the period. This thesis has further confirmed the presence of reigning Swedish protectionism from the early 1780s to the late 1820s. Several sectors were protected by high tariffs and import bans – more or less all iron and steel production, key export goods such as battens, timber, tar and pitch, as well as beer had very high tariffs and a low degree of import penetration. The “mercantilist sophistication” of allowing the import of raw materials with low or zero duties while protecting manufactures or commodities with higher degrees of refining, which was the basis of British trade policy at the time, could be seen in Sweden as well. This is mostly noticeable in the case of several textiles, where the import tariffs on raw cotton, raw flax, raw hemp, raw silk, and dye stuffs usually were very low, while the more refined or processed fabrics were sheltered by high tariffs. This big differentiation waned over time, however, mostly as tariffs on finer textiles decreased as a result of increasing prices and slowly changing specific tariffs. In the case of flax and cotton, there was a clear decision in the 1820s to increase the tariffs on the raw materials, which in practice ended this system of mercantilist differentiation. This practice had also been in use for lead and tin, where differentiation also decreased over time, but not as drastically as for textiles.

Scholars such as Eli Heckscher and Sven Gerentz wrote about the protection of domestic production in textiles and iron a long time ago, and recently Klas Rönnbäck dealt with the protection of sugar-refining. Less attention has been given to the sheltering of the forestry sector, which as shown here was clearly evident at least before 1827. It can be added that domestic beer breweries also received high tariff protection over the period, which, aside from small quantities of British porter, kept foreign beer completely out of the Swedish market. The same can be said for forestry goods, which before Sweden lost Finland and with it part of its tar production and exports, experienced a very low degree of import penetration. An infant industry such as pit coal also was given increased protection after 1815, even though it was moderate compared to the protection given to iron and forestry. The result was a partial import substitution, where increased domestic production to some extent decreased the demand for foreign pit coal during the first 15 years of this policy.\textsuperscript{2}


\textsuperscript{2} The protection of domestic pit coal was however in place for quite a brief period of time, as the import tariff was completely removed already by 1848.
Taken together then, it seems that a substantial part of the Swedish economy sat behind a wall of tariffs and import bans. Protectionism was perhaps more pervasive than has been previously thought, spanning across a large number of economic sectors. It is however also notable that for the most part of this period, the single largest part of the Swedish economy, agriculture, remained virtually unprotected. This calls into question issues of how efficient protectionism really was – and also how beneficial it could have been for the pre-industrial economy.

Tariffs were set not only for protectionist purposes, but also for the sake of bringing in revenue to the public treasury. This point has so far received limited scholarly attention for this period of Swedish trade policy. Customs revenue often made up around 20 percent of total government revenue, and from 1810 to 1830 it was the single largest source of income. Given the somewhat dire state of the Swedish government’s finances, at least before 1815, it is perhaps not surprising that such a large part of the fiscal burden was put on foreign trade. A substantial part of chapter five here has been dedicated to analyzing which goods were the largest contributors of customs revenue during this period. It was found that quite a small amount of goods made up the large bulk of customs revenue. Usually long-distance consumption goods with little or no domestic equivalents made up the majority of the fiscally important goods, the type of goods Adam Smith called “appropriate targets of taxation.” These were for instance wine, spirits and coffee – but also raw sugar and raw tobacco. Sweden probably stands out in its reliance on salt as a fiscally significant import. To be sure, it had no domestic equivalent and had to be imported, but in Smith’s classification it was rather a “good of necessity” which, in contrast to luxuries, should not have been taxed highly. Sugar and tobacco are interesting to single out because they were important for domestic refining and processing, but compared to other raw materials/inputs they were taxed fairly high over the period, and the most plausible explanation for this is that they were fiscally important. Even though this dissertation has not sought to investigate or analyze issues of “efficient protection”, it can be noted that when it comes to the import of raw sugar and raw tobacco there could have been a clash in policy. Since the efficiency of protectionism partly depends on raw materials being imported as cheaply as possible, the higher the tariff the higher the cost for domestic producers. The Swedish decision to tax the import of raw sugar and raw tobacco at a high level for fiscal purposes could hence have clashed with the goal of efficiently protecting the domestic refineries.

It should be added briefly that the relatively high tariffs on consumption goods increased the prices of these goods, and as such also increased costs for domestic consumers. There was hence distortion not only on the producer side, but also on the consumer side, further adding to the restrictiveness of Swedish trade policy.
7.2 Swedish Trade Policy in an International Perspective

The literature on trade policy around Europe has put some emphasis on the Napoleonic Wars between 1803 and 1814 as being a driver of partial change of trade policy in several countries. Seemingly contradictorily it led both to the tearing down of certain mercantilist restrictions on trade, while also strengthening protectionism of certain economic domains. The period also saw first-movers towards a more liberal trade policy, as Denmark and the Netherlands in Sweden’s vicinity tore down some of the obstacles towards freer trade. Overall, however, trade policy around Europe (and the United States) has been characterized as mostly protectionist during this period.

In many ways Swedish trade policy between 1780 and 1830 was the rule rather than the exception in an international comparison. 1) Overall, Sweden maintained high tariffs, as did England and France towards the end of the 18th century and increasingly so during the height of the Napoleonic Wars. Much like Heckscher noted, Danish trade policy from 1797 was generally more liberal than the Swedish, with lower tariffs and fewer import bans. 2) Sweden’s tariff code discriminated quite heavily between raw materials (which generally had low tariffs) and manufactures (which generally had high tariffs or were completely banned from import). Increasing the tariff with the degree of refinement of the goods was really quite similar to the English “mercantilist sophistication” which was so admired in France. 3) The reliance on tariffs as a source of government revenue mirrored the British situation. Customs revenue as a share of total tax revenue was overall close to British levels during the period, and the emphasis on long-distance consumption goods as the source of the lion’s share of total customs revenue also conformed to British ways. Sweden might, however, have stood out in placing so much fiscal burden on export tariffs, at least before 1817. We know from Paul Bairoch’s classification of trade policy around Europe that several other countries (Denmark, England, and the Netherlands, for instance) taxed their own exports as well, but at least England likely did not earn as much customs revenue from exports as did Sweden. Swedish export tariffs were also higher than the Danish ditto before 1817. 4) Like most other countries in Europe, Sweden had a moderate degree of agricultural protection between 1820 and 1830, following Bairoch’s findings (see chapter two). Based on findings from Lampe et. al, Denmark seems however to have had higher tariffs on certain agricultural goods during this decade, particularly on cheese, but also on beef and pork.

In one significant aspect Sweden went against the tide during this half-century. While Denmark, England and France increased their tariffs during the Napoleonic Wars, they rather decreased in Sweden. England and France of course raised their duties as part of their economic warfare against one another. Denmark, on the other hand, raised tariffs in several steps for fiscal reasons and in order to adjust for the rampant inflation of the time. Sweden did not conduct any ordinary tariff revision during the war, nor did the equally
neutral United States, but instead temporarily suspended the Navigation Act. By not adjusting tariffs for inflation and by suspending the Navigation Act, tariffs dropped to record lows as a result. Comparatively speaking this had quite a significant fiscal impact. While Denmark was able to increase customs revenue and as a result double its government revenue during the war, as shown by Patrick Winton, the increase was less sharp for Sweden.\(^3\)

Ronald Findlay and Kevin O’Rourke argued that the Napoleonic Wars and the blockades had substantial impact on trade and trade policy around Europe, and likewise we see that they had distinct effects on Swedish foreign trade and trade policy as well. This will be discussed further in sections 7.3 and 7.4.

### 7.3 The Relationship between Tariffs and Trade

Chapter six tried to statistically answer the question of whether Swedish pre-industrial tariffs had a distortionary impact on trade – did the protectionist tariffs impede imports as they were intended to do? Here regression results gave no indication that tariffs on protected goods were distortionary on the aggregate level, measured as the total level of imports. Distortionary effects can, however, be observed by the simple fact that the degree of import penetration for protected goods – iron, steel, finer textiles, beer, battens, timber, pitch and tar – was low to zero throughout the period, as chapter four showed clearly. The only real difference in the degree of import penetration in these goods occurred with tar, which became an import of larger significance towards the end of the period. This could, however, mostly be attributed to Sweden’s loss of Finland in 1809, as Finland had been a high and steady producer of tar. What was earlier domestic tar production had thus to be partially replaced by imports after 1809. Other than for tar, the designated protectionist tariffs were also distortionary in practice, even though it should be carefully noted that several of these high tariffs were also import bans. Import bans may then have had a higher distortionary impact on imports than “ordinary” high tariffs without import bans (as was the case for several of the consumption goods that were imported).

The distortionary impact of tariffs on trade was then assessed on a disaggregated level, where only goods that had undergone clear tariff hikes over time were considered. There was no conclusive evidence that these tariffs had become distortionary to trade, except for plausibly in the cases of grains, pit coal, raw flax and cheese, where the increase in tariffs and decrease in import levels coincided. In the cases of beef and pork, no clear decrease in imports could be observed, and in the cases with butter and raw cotton import levels either stagnated or even increased after the tariffs were raised. The impact of the tariffs on butter and raw cotton was hence more fiscal than it was

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\(^3\) The Crown’s income from customs revenue did increase after 1808, but this was as much as a result of the re-organization of the handling of customs revenue as it was a result of a surge in imports. Little or nothing had to do with active tariff policy in this regard.
protectionist or import-substitutionary. The statistical tests further confirmed this, as no clear correlation could be established between increasing tariffs and decreasing import levels. Even though certain import-substitutionary effects could have been present for grains and pit coal, there is little evidence for this on the other goods considered. This requires that the changes to tariffs on agricultural goods in the 1820s be seen in a new light. Whereas they could earlier have been considered to be protectionist, it seems now that the short-term impact was only fiscal, except in the case of grains.\(^4\)

What may have been itself “distortionary” to the possible relationship between tariffs and import levels is the impact of the Napoleonic Wars. Swedish imports virtually soared during the height of the war, after 1807, and it seems as if this boom was deeply connected to the blockades between England and France. The import of goods such as coffee, sugar and tobacco, but also textiles and other goods, increased tremendously, and it seems as if they in large part came from England and USA to circumvent the blockades. Given this unusual surge in imports, it is not surprising that no distortionary relationship between tariffs and trade could be statistically established. As was also shown in chapter six, there was a clear statistical relationship between the war and the rise in imports, strengthening the conclusion that the impact of the war filtered away the plausibly distortionary impact of the tariffs.

7.4 Explaining Swedish Tariff Structure

Even though it has not been the explicit aim of the dissertation to explain changes over time, it could be interesting and worthwhile to ponder on how the changes in tariff structure just outlined came about. First it is important to make clear a couple of points. First, there was virtually no liberalization to speak of during the period 1780 to 1830. The overall level of protection was no lower towards the end of the period than it had been in the beginning, and the basis of the prohibition system remained mainly untouched. Second, the changes that did occur were minor in a wider geographical comparison – but for instance the total decrease of export tariffs after 1816 was a breakthrough by Swedish standards. Third, even though protectionism and mercantilist differentiation decreased over time, when it came to textiles for instance, we cannot say for certain that this decreased effective protection. The level of protectionism and differentiation that yet remained in the 1820s may still have been effective enough. Protectionism of the forestry sector was also eased somewhat towards the end of the period, but the tariffs that replaced import bans still remained fairly high.

The changes that did occur can, however, be analyzed on an aggregated schematic level. As typically happens, the interplay of a couple of factors af-

\(^4\) Montgomery (1921b, p. 19) acknowledged the fact that in 1824 high tariffs were set on dairy and meats (“barn products”) which had some respectable level of import.
fected the possibility of changing tariffs. The first important factor is empha-
sized in the international literature – the impact of the trade disruption created
by the Napoleonic War through economic warfare in the form of mutual
trade blockades between England and France. For Sweden this resulted in a
slump for traditional exports, iron mainly, but also in a stagnation for forestry
exports. There was instead a boom in imports and re-exports during the time
of the blockades between 1807 and 1814, which created a large negative trade
balance. The crisis caused representatives of key export interests to lobby for
a cut in export tariffs, which were believed to have particularly hampered
forestry exports during the preceding decade. This cut could, however, not
occur without a probable loss of customs revenue, which was a key source of
income for the central government. Hence, the cut in export tariffs that went
into effect starting in 1818 put further fiscal burdens on import tariffs – as
shown by the increasing share contributed to customs revenue by imported
goods and the decreasing contribution of exported goods. The significant
decrease of some export tariffs, on bar iron, battens and timber mainly, hence
forced an increase in some import tariffs to offset the loss of customs revenue,
something which concerned contemporaries in the 1820s. Contemporary
policymakers then put a larger emphasis on wine as a fiscal good, but also
decided to increase tariffs on sugar, tobacco and coffee. These goods were
considered luxuries and were hence deemed to be able to bear a larger part
of the fiscal burden. As the import of these inelastic goods increased and that
of “goods of necessity” such as salt and grains decreased towards the end of
the period, customs revenue increased as a result. There was also an upward
pressure on tariffs on such goods as raw cotton and butter, which made an
increasing contribution to customs revenue towards the end of the period.

What made such a change possible in the first place was the changing nature
of Swedish institutions. As shown above, the constitutional overhaul of 1809
partly ended the authoritarian era of the 1780s, 1790s, and the early 1800s.
Whereas trade policy then had been completely in the hands of the government
the parliamentary Diet got a much bigger say after 1809: members now could
be included in the committees that prepared the tariff revisions and voice their
concerns and introduce bills in parliamentary sessions. Trade policy hence, to
paraphrase Arthur Montgomery, became a more contentious issue in Swedish
politics than during the previous decades. Tariffs and the prohibition system
now became a matter of great debates during the parliamentary sessions,
as was also shown by Patrick Jonsson. This likely opened up for outside
interests to voice their concerns to parliament and government. An indication
of this institutional change and its importance is that tariff revisions became
much more frequent after 1809 than before – the issues simply had to be
discussed and revised more frequently due to the infusion of interests. One
may wonder if the liberalizations of trade policy and tariffs initiated in the
1830s and gradually realized by the 1850s had even been possible without
the institutional changes accomplished in 1809. More in-depth research on
the political debates and legislative path of the liberalization of Swedish trade policy would be needed to fully answer that question, but it is a hypothesis that could be worthy of some exploration.

A theoretical argument can be made that tariffs come as a package. In times when tariffs constitute the single most important item of income for the government, the decrease of one tariff may result in a need to increase another. If not, there would be a noticeable loss of revenue. Governments that are under fiscal pressure may need to balance tariffs of fiscal importance against one another, unless other sources of tax revenue are explored. This argument could be worth exploring when investigating processes of trade liberalization. We know that tariffs were of great fiscal importance for many states during the 19th century, and evidence of trade liberalization in both England and the US (see chapter one) seems to suggest that tariffs could be lowered only once alternative sources of revenue were established. Similar evidence and mechanisms can be found in the reduction of Swedish export tariffs, even if on a smaller scale.

7.5 Final Remarks
I want to emphasize that what can be termed protectionism in Swedish trade policy during this period remained mainly untouched – the restrictiveness of trade policy was hence rather constant. What was actually changed in the structure of tariffs concerned the fiscal impact of trade policy – the fiscal structure of tariffs, if you will – as outlined above. There is thus some empirical support for the claims of an inflexible, prohibitive Swedish trade policy during the late 18th and early 19th centuries, as described by Heckscher, Gerentz, and partly Montgomery. This is, however, not the entire story, either empirically or theoretically. Tariffs did change some over time, where the years of the Napoleonic Wars can be seen as a slightly more liberal period when tariffs fell. Tariffs also changed between commodity groups, as textile tariffs and forestry tariffs fell towards the end of the period while agricultural tariffs rose. Hence, protectionism may not have been under fire, but trade policy was not completely static either. The changes that did occur, such as the cut in export tariffs, also coincided with a change in political structure.

Furthermore, tariffs are usually set on a multitude of goods and often not all are set with protectionist intentions. This dissertation has tried to highlight the fiscal side of trade policy, of setting tariffs, and show that, even in very mercantilist political and economic environment, low tariffs existed on raw materials. Without analyzing the structure of tariffs, these sides of story may never have appeared. The preceding pages may not have disproved the prevailing narrative about Swedish trade policy, but they have at least brought out previously hidden factors.
A. Price Sources

**Exports**

Jörberg: Bar iron, battens, timber, herring, tar, grains.

Adamsson: Bundle iron, hoop iron, bolt iron, sheet iron, anchor, steel, gar copper. Before 1795 these are linked to the price of bar iron from Jörberg by using the difference between them in 1795 and extrapolating backwards.

Other estimations: For pitch, the price of tar from Jörberg has been used. The price of alum has been estimated by linking it to that of bar iron as follows: alum tariff x (bar iron price/bar iron tariff), following the method of Schön (1983). The price of train oil has been estimated from the price of herring, by taking the difference between their unit values in the figures from the National Board of Trade. This difference was 3.33 between 1780 and 1798, 2.4 between 1799 and 1815, and 4.3 between 1816 and 1830. The price of brass has been linked in a similar way to the price of gar copper throughout the period. The prices of laths, spars and rafts have been linked to the price of timber, using the difference in unit values in the toll lists.

**Imports**

Clark: Sugar, tobacco, tea, coffee, cotton, wool, raisins, pepper, port wine, beer, wheat, rye, oats, peas, barley, English salt, butter, cheese, potatoes, rice.

Posthumus: French wine, brandy, Spanish salt, Portuguese salt, cochenille, indigo. After 1814 these have extrapolated using Swedish CPI. This source has been used for the prices of silk, sole leather, and lead from 1780 to 1791.

Jacobs & Richter: Tallow, beef, pork, flax, hemp, silk, leather, lead, linseed oil, from 1792 to 1830.

Jörberg: Hemp, flax, pit coal, beef, tallow, linseed oil from 1780 to 1791. Malt throughout the period.

Other estimations: The price of brandy has been used as the price of rum. Where the ad valorem tariff has been calculated for pitch, tar, battens and timber (from 1827), Swedish prices have been used.
B. Comparison between Different Series on Foreign Trade

Values are provided in current prices, since that is what is available for all four series. The end result would naturally depend on which deflator and technique are used.

*Figure B.1* Difference Between National Board of Trade and Häggqvist, Export Figures in Million Riksdaler, Current Prices

Note: Figures for 1780–1813 from National Board of Trade. Figures for 1815–1830 from Generaltullstyrelsen. Figures 1783–1786, 1789, 1814–1818 and 1824 are missing.

*Figure B.2* Difference Between National Board of Trade and Häggqvist, Import Figures in Million Riksdaler, Current Prices

Note: Figures for 1780–1813 from National Board of Trade. Figures for 1815–1830 from Generaltullstyrelsen. Figures 1783–1786, 1789, 1814–1818 and 1824 are missing.
Figure B.3 Difference Between SHNA and Edvinsson, Export Figures in Million SEK, Current Prices


Figure B.4 Difference Between SHNA and Edvinsson, Import Figures in Million SEK, Current Prices

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D. Division of Tariff Categories in Chapter Six

Fiscal: Wine, port wine, brandy, salt, sugar, coffee, tea, tobacco, pepper, raisins.

Raw materials: Grains, tallow, linseed-oil, raw cotton, raw wool, raw hemp, raw flax, uncolored silk, sole leather, cochenille, indigo, pit coal, unprocessed lead, unprocessed tin, oak, unprocessed wood.

Protectionist: Pitch, tar, battens, timber, bar iron, iron manufactures, steel, processed lead, processed tin, copper, alum, beer, dyed silk, finished flax, finished hemp, finished wool, butter, cheese, potatoes, beef, pork.
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Kungl. Maj:ts kungörelser, Kungörelse angående de nu utfärdade sjötullstaxor för inkommande varor, Stockholm den 20 mars 1816
Kungl. Maj:ts kungörelser, Kungörelse angående förbud mot såväl försäljning av tillrett kaffe, som bruk av vissa utländska vinslag, likörer och drycker, Stockholm den 30 april 1817
Svensk författningssamling (SFS), 1826

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