EARLY MODERN TRADE FLOWS BETWEEN SMALLER STATES

THE PORTUGUESE-SWEDISH TRADE IN THE EIGHTEENTH CENTURY AS AN EXAMPLE[1]

Maria Cristina Moreira
School of Economics and Management, University of Minho,
Interdisciplinary Centre of Social Sciences (CICS.NOVA.UMinho), Portugal
Jari Eloranta,
Appalachian State University (USA), University of Jyvaskyla, (Finland),
Jari Ojala, Lauri Karvonen
University of Jyvaskyla, (Finland)

The eighteenth century was a period of many great power wars and competition for colonies. However, despite the turmoil, smaller nations were able to carve their niches in the international trade of the period. Examination of new sources, used in a comparative fashion, indicates that bilateral trade still has much to offer for the analysis of international trade history. The pattern of bilateral trade between Sweden and Portugal indicates that they were not equally dependent on that trade, and that the products traded varied over time. Usually bulk commodities dominated this trade, as each country focused on its core competencies. Overall, the volume of trade and the number of ships traveling to each nation tended to grow over time, although this growth was not very even. The French Revolutionary and Napoleonic conflicts were a time of difficulties for both states, given their involvement in wars. While the overall effects of warfare are typically quite negative, these years offered opportunities for smaller states too, until they had to adjust to the intense competition of nineteenth century globalization.

Keywords: eighteenth century, international trade statistics, Portugal, Sweden, globalization, economic history, wars.

1. This article was funded by the Project PTDC/HIS-HIS/118984/2010: Trade Networks of Small and Neutral States before, during, and after the Revolutionary and Napoleonic Conflicts (1750-1850). Funding for this project has been provided by Fundação para a Ciência e Tecnologia, FEDER, PTDC 2010, as well as the Finnish Centre of Excellence in Historical Research, funded by the Academy of Finland.

e-mail: mcristina@eeg.uminho.pt; elorantaj@appstate.edu; jari.ojala@jyu.fi, lauri.j.t.karvonen@jyu.fi

1. Introduction

Early modern international trade has been researched as part of the issue of how the growth of international trade contributed to economic growth and industrialization. Trade flows have usually been analyzed in the context of great (trading) powers, and by focusing on major trade routes such as East Indian trade to Europe,[2] Mediterranean trade (Braudel, 1995), Baltic–Dutch Trade (Tielhof, 2002), and trade flows between North America and Europe (North, 1966; Ahonen, 2005).

Despite wars and the short-term disruptions they created for trade, the seventeenth and eighteenth centuries were a period of growth, in the context of the expansion and consolidation of European empires. The age of mercantilist warfare was accompanied by the rising importance of sea power. France, the Netherlands, and England, became the "systemic leaders" due to their extensive fleets and commercial expansion in the period before the Napoleonic Wars (Kennedy, 1976; Kennedy, 1989; Modelski and Thompson. 1988). Early modern states attempted to exert tight control over external trade flows. Even if trade was not a large sector in the national economies, given the predominance of agricultural production and activities, it nevertheless provided much needed revenue for the state. Moreover, states that relied more on trade revenues in order to cater for their spending needs usually also developed more complex systems of finance, including public debt. These, in turn, facilitated the transfer of some of the political and economic power to the merchant elites (Acemoglu, Johnson, and Robinson, 2005; Bonney, 1999a; Bonney, 1999b; Ferguson, 2001; Ferguson, 2003; Findlay and O'Rourke, 2007; Hart, 1999). Therefore, the extent and structure of early modern trade flows and their economic and fiscal impacts should be a major issue in the study of early modern economic growth and development.

Although trade has been an object of interest for economic historians of the industrial revolution, less attention has been paid to exchanges between small countries. More generally, the roles

2. Relatively few studies of the various East-India Companies have analyzed the actual trade flows in detail, or applied statistical methods to the analysis. See e.g. Blussé, 1996; Hejeebu, 2005; Lawson, 2014. On trading companies and the emergence of multinational corporations, see Carlos and Nicholas, 1988. On trade expansion in this period, see O'Rourke and Williamson, 2002a.

that smaller nations played in the international economy, especially in this period of expansion of the European empires, need further investigation. Most trade historians have assumed that small countries occupied an insignificant role in the colonial networks. As Moreira and Eloranta (2011) have argued, while most smaller European states and the United States of America were politically and economically weak, they still contributed to and even controlled some significant commodity trade flows. Although, it is natural that historians focus on great empires, such as Great Britain and France, the consequence is that we have too little understanding of many of the trade networks between small and large nations, even though these networks were quite literally the lifelines of the great powers during times of intense conflict. During recent years, more effort has been put into investigating the concept of neutrality and the role of small states during the Napoleonic wars than previously. In this perspective, this article discusses the patterns of trade between Sweden and Portugal during the turbulent late eighteenth and early nineteenth centuries.

The trade between small nations can also provide insights into the overall development of trade and shipping, such as the role of the "transport revolution" in the growth of international trade, and the causes for this revolution. Were they technological, organizational, or institutional? The idea of the "early transport revolution" presented by North in the 1950s was largely refuted by Harley in the 1980s who claimed that the real transport revolution did not occur until the wider introduction of iron steam ships in the late nineteenth century (North, 1958; Harley, 1988).

The evolution of risk and economic instability is important for transport costs. In researching the Swedish trade with Southern Europe, Leos Müller has claimed that the risks of shipping declined during the eighteenth century. That had a positive impact on trade productivity, since shipping required smaller crews (Müller, 2003; Müller, 2004; Müller, 2006; Müller, 2012). The decline of such a risk was vital for small nations, as they did not have the resources, for example, to provide convoys to protect merchant vessels. However, even if business risks have been extensively studied, general trends of how uncertainty affected fluctuations in trade volume has not been widely discussed. Ojala and Karvonen (2013) demonstrate how fluctuations in trade between Sweden and

Portugal leveled out during the eighteenth century. It is likely that even if there was not any "transport revolution", overall, the trade fluctuations diminished as communications slowly improved and the semi peripheries became better integrated in the international economy and trade.

In what follows, we provide an in-depth look at the trade flows between two smaller nations that will reveal some of the opportunities and problems in engaging in research on bilateral trade flows. Thus, the article discusses whether there was a "transport revolution" and whether conflicts expanded trade between small nations during the period. First, we explore some of the issues related to the sources of data as well as the methods used to compare the data. Then we observe and analyze the general trade flows from the seventeenth to the nineteenth centuries. Our main focus, however, is on the eighteenth century and especially the latter part of that century.

2. Sources and methods

Multiple reasons make early modern trade a difficult issue: for example lack of reliable data, measurement issues, comparability of the data, and the difficulty in accessing the sources. The recent digitization of the Danish Sound Toll Registers has broken new ground for quantitative historians as this unique source provides abundant information on trade entering and leaving Northern Europe.[3] All vessels (with a few exceptions due to the war of privileges attached to certain ships) entering or leaving the Baltic were registered. Moreover, these registers contain detailed information on flows of commodities through the Danish Sound.[4] The purpose of the Sound Toll Registers was to document the collection of duties from vessels passing through the Sound.[5] In the toll accounts, all the ships that were required to pay duty were listed. In the customs office, *Toldkammer,* the officials recorded the date of passage, name of the ship's master and his town of residence, port or ports of

3. See http://www.soundtoll.nl/index.php/en/over-het-project/str-online. For a discussion of the usefulness of the data in the Sound Toll Registers see e.g. Gøbel and Hansen, 2007.
4. See Ahonen, 2005 for details. They do not measure intra-Baltic trade, of course.
5. Sound Toll records recorded transfer traffic, whilst the Portuguese and Swedish records were about the overall foreign trade. Thus, there are, of course, also Danish foreign trade statistics, which we do not use here.

departure and destination,[6] home port and the name of the ship,[7] the composition of the cargo, and finally the custom duties paid (Ahlström, 2000: 16; Rössner, 2010: 1). At the Sound, ships had to pay two different duties: "cargo dues" and "shipping dues". The first were set according to cargo and the later according to the size of the vessel (Ahonen, 2005: 107). The payment of duty was based on various agreements and numerous regulations. In the customs office, the names of foreign articles were translated into Danish. No conversion or standardization of the foreign units was made: the original unit was retained (Scheltjens, 2009: 79). If the ship was carrying only ballast, it had to pay only light duty. For example in the 1740s, it was only two riksdalers. A ship with an average-sized cargo on the way from Sweden to Portugal paid some 75 riksdalers. Generally speaking the itemization was done carefully and meticulously, and the accuracy of the registration improved over time (Ahonen, 2005: 23). It is worthwhile noting that the rate of custom payments for each product seldom changed, even though the commodity prices varied considerably over time.

However, the Sound Toll Registers' value as a historical source deserves careful consideration as the present authors have shown in a preliminary work (Ojala, Karvonen, Moreira and Eloranta, 2015). The trade volumes provided by the Sound Toll Registers and by Swedish and Portuguese sources match fairly well. This suggests that both sets of sources are fairly accurate. Thus, they can be used to assess the trade flows between Portugal and Sweden in the late eighteenth and early nineteenth centuries.

The second main source we use in this paper is the Portuguese trade records with Scandinavia (Sweden and Denmark) for the years 1776, 1777, 1783, 1787, 1789, and 1796–1800. They come from the Portuguese Balances of Trade. The body that recorded the entry and exit of merchandise in Portugal was the *Contadoria da Superintendencia Geral dos Contrabandos, e Descaminhos dos Reaes Direitos* (General Superintendence Accounting of Smuggling and Embezzle-

6. The port of destination is mentioned from the mid–1660s (Gøbel, 2007). During the eighteenth century sometimes only a rough estimate of the point of departure is mentioned, for example: Baltic or Mediterranean.

7. The name and size of the ship were often missing. Meanwhile the name of the agent is often mentioned, especially from the early nineteenth century onwards (Ahlström 1997: 50. Ahonen, 2005: 23).

ment of Royal Rights). The officer who signed the balances of trade between 1800 and 1825 was Maurício José Teixeira de Moraes, who had been an employee of the *Contadoria* since 1774.

The Balance of Trade was built upon different sets of documents issued by several state bureaus and compiled in "*Books, Deals, Maps, Customs dispatch manifests of all the Kingdom Custom Houses and tax bureaus of this city*".[8] These departments were responsible for the accuracy of the data collected. The source displayed both quantitative and qualitative information: prices, quantities, units, goods, classes, origins, and ports of entry of goods, exchange rates (for some years and markets), number of Portuguese and foreign ships that arrived and departed the country (also, for some years and markets). Each record of imports or exports was measured in terms of value. Most of the time it is also possible to identify the product and its quantity, price, and unit. The currency unit used was the *réis* and prices varied over the years. Export prices were FOB – free on board – and import prices were CIF – cost, insurance, and freight.

It is possible to identify the flows of goods by destination and by Portuguese administrative region (where that flow was registered). For exports of goods to foreign nations, the origin within the Portuguese Empire (Africa, Asia, Atlantic Isles, Brazil, or Kingdom) is indicated. It is possible to identify the last port-of-call origin of imports as well. Moreover, in some cases we have information about the importing administrative region.[9]

Bearing in mind that smuggling and tax evasion were a perennial issue during the mercantilist era, it is safe to say that the Portuguese Balance of Trade provides a good representation of the actual flows of goods from and to Portugal and their prices. Furthermore, complementary sources are available in various Portuguese archives and can also be used to study trade between Portugal and Sweden.

8. "Livros, Relações, Mappas, e Manifestos dos Despachos de todas as Alfandegas do Reyno, e Mezas Fiscáes desta Cidade". The Balance of Trade within the Kingdom of Portugal with the Foreign Nations, year 1800.
9. For further details, please check *Portugal* by Maria Cristina Moreira, included in this volume's questionnaires.

Swedish foreign trade statistics are similar to Portuguese statistics. They were constructed to make the collection of customs duties by the state more efficient.[10] It was in 1637 that the kingdom of Sweden first attempted to collect quantitative information about its foreign trade. However, until a century later, the statistics remained fragmented.[11] From 1738 onwards, the Board of Trade (*kommerskollegiet*) started to summarize yearly trade statistics in tables (Historisk statistisk för sverige del 3. p. 66-68; Alanen, 1964). These tables were based on customs information from all Swedish ports and included all foreign trade data. The reporting convention remained uniform until 1814.[12] The Swedish Board of Trade collected various types of information. The bulk of the archive concerns the series of annual reports on foreign trade and shipping (Series 1, 2, 4, and 5) and the balance of trade accounts (Series 3). Besides these, there are several collections of reports on, for example, the number and size of the ships leaving or entering the country. Some of the series (Series 1, 4, and 5) provide separate yearly data on each port for trade and shipping. The entire amounts of traded products are reported (in a summarized form, not ship by ship) both in volume and in value (*riksdaler*). Series 2 is organized by different products and product sets. It contains tables or sheets labeled according to a product name; rows are domestic ports or foreign countries (the bottom line summarizes the total import or export amount), and the columns contain periods ranging from 10 to 15 years. Thus, each table was for one year or one product, with information on import or export of each product group, with details given for each Swedish port as well as a total for the whole of Sweden. The balance of trade accounts give the trade balance (*Handelsbalans*). The trade balance is classified either geographically or by product.

10. Most of the important studies of Swedish foreign trade statistics were written at the turn of 1960s and 1970s. See Vallerö, 1969; Högberg, 1969; Historisk statistik for Sverige. Del 3 Utrikeshandel, 1972.
11. On Swedish foreign trade from 1637–1737, see Heckscher and Boethius, 1938; Vallerö, 1969.
12. During this long period, the collection of foreign trade statistics was strongly debated and criticized within the state administration. In 1776, the Board of Trade was no longer allowed to interfere with the trade statistics, and from there on other officials started to supervise the process. Historical Statistics för Sverige, del 3, 1972: 66-68; Vallerö, 1969: 97-99. See the questionnaire on Sweden in this volume for further details.

There are some difficulties in making comparisons between the national sources and the Sound Toll Registers. The Sound Toll Register data provide customs dues for each cargo and volumes with dozens of units that were used for each specific commodity. It is therefore only possible to measure trade in volume by converting the various measuring units into tonnages. The customs payments amounts are the most uniform numerical data in the Sound Toll Registers. By comparing customs payments to tonnages, Scheltjens has estimated that 56.8 kg of cargo was valued at 1 skilling of taxes (or 2727.7 kg per riksdaler). Even though the ratio of tonnage and product varied for each individual product, this evaluation fits well with the equivalency of one riksdaler for one last of freight when handling large amounts of data (Scheltjens, 2009: 94). Thus, using this estimator, it is possible to translate volumes into values.

Our goal is to use Sound Toll Register data to evaluate trade flows. In order to do so, however, we have to examine the comparability of the data. We endeavor to use a quantitative (cliometric) approach in our study. The study of early modern trade has not usually embraced quantitative methods that have become common among economic historians, i.e. the cliometric approach to historical analysis. Many economic historians studying the early modern period have focused on warfare and fiscal developments. For example Philip Hoffman has shown that it is possible to analyze the military sector and technology over several centuries, in fact before the industrial revolutions (Hoffman, 2011; Hoffman, 2012). Nonetheless, less effort has been placed on the broader trade flows before the nineteenth century, i.e. the type of analysis used to investigate the first era of globalization (Jacks, O'Rourke and Williamson, 2011; O'Rourke and Williamson, 1994, 2002a, 2002b). We use fairly simple statistical methods to uncover changing patterns over time instead of delving into intensive time series techniques.

As already stated, the main purpose of compiling trade statistics was to collect customs duties and compute the trade balance for the benefit of the state administration. Therefore, the trade balances of early modern Europe mostly represented trade in monetary values. Some authorities, for example in Sweden, also measured trade, especially for bulk items, in volumes as well. Meanwhile, in Denmark, the Sound dues were based on trade

volumes. Thus, one of the problems in any comparison of trade flows is to reconcile statistics on volumes and values.

There are both advantages and disadvantages to using trade statistics in value or volume. Volume is most suitable for long time series, because it abstracts from prices changes that might have an effect on the relative value of each good. On the other hand, it might sometimes be pointless and difficult to analyze and compare trade development in volumes for very different products in the absence of a common yardstick.[13]

Accordingly, values provide commensurability. When trade flows for different products are all measured in a common currency, the distribution of trade between different sets of commodities and between different geographic areas is immediately comparable. It must be underlined, though, that comparing trade amounts between different countries can be challenging because of exchange rates. While exchange rate data especially for the biggest European economies, such as Britain, the Netherlands, and France, are readily available, this may not be the case for semi-peripheral countries (Denzel, 2010).

Another issue with trade statistics measured in value concerns the significant price gaps between different areas. Because of trade costs and violations of the law of one price, different prices for the same commodity are measured at the different extremities of one trade flow. Even within the same country commodity prices could vary greatly. In 1800, for instance the price of log timber was about four times higher in Stockholm or Uppsala than in Jämtland, some 200 kilometers northwest of Stockholm and Uppsala.

Therefore, one should study trade flows both in values and volumes, as we have done in the following section, to get a better picture of the economic relationships between two locations.

The major question of whether there was a transport revolution within small nations during the eighteenth century relates also to the overall economic development of these countries. Even though the Swedish economy, for example, was rather agrarian at the time, international trade had a crucial impact on export-led growth. As Lars Magnusson states: "The expansion of Sweden's international

13. On these issues, see Historisk statistic för Sverige Del 3. Utrikeshandel 1732–1970, 1972: 79-80.

trade drew the country into a process of international capitalist growth" (Magnusson 2000: 1). Therefore, it is vital to know the size and composition of foreign trade in order to study the standard of living or GDP in the early modern period.[14] The long eighteenth century is particularly interesting because there was a substantial increase in trade volumes during the century: for instance long-distance shipping expanded greatly. At the same time income, measured either by GDP or real wages, increased only slowly in Western Europe and almost stagnated in Sweden (Harding, 1999: 14).[15]

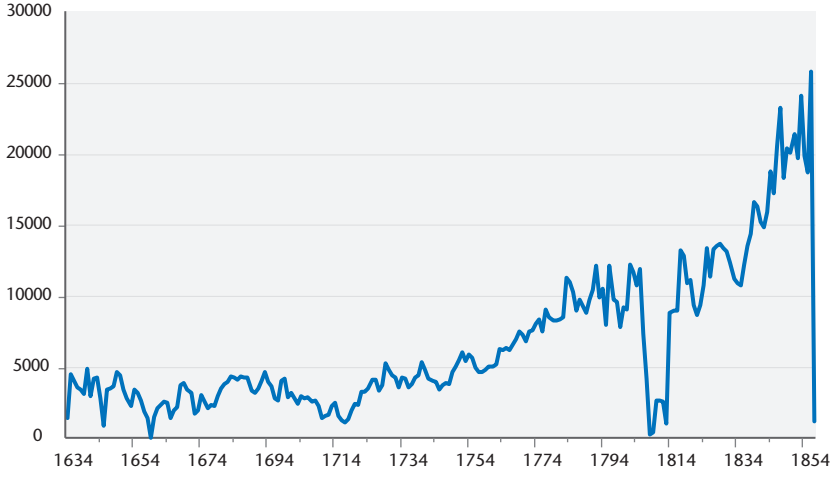
3. Trade flows between Scandinavia and Portugal: overall patterns and observations

Dutch, French, and British vessels dominated seventeenth-century international trade and shipping. Dutch dominance was especially clear in the Baltic trade. However, during the eighteenth century, the British acquired an increasing share of the Baltic trade. Moreover, countries and city-states with access to the Baltic, such as Prussia, gained a significant role. During the late eighteenth and early nineteenth centuries, the French Revolutionary and Napoleonic wars put a halt to the maritime trade of some of the great powers, France in particular, which in turn afforded opportunities for neutral commercial fleets to play a more prominent role.

The first part of this story emerges clearly from the Sound Toll Registers (see Figure 1). Overall, the volume of trade remained fairly flat in the seventeenth century and increased substantially in the eighteenth century. We can then observe the devastating impact of the Revolutionary and Napoleonic conflicts. Growth after the fall of Napoleon in 1815 was quite rapid too, reflecting the surge of trade of the first globalization. It was sustained until the 1850s when the Crimean War brought a slowdown in trade.[16]

14. Trade balance (X-M) is one of the four components in the demand approach to GDP: (GDP) Y = C + I + G + (X • M), where C= consumption, I= investments, G= government spending, X=exports, I=imports.
15. On GDP, see Maddison, 2010. On nominal wages, see Allen, 2001. On the development of Swedish GDP, see Edvinsson, 2011.
16. The fall may also be explained by the fact that the collection of Sound Toll Register data may still be incomplete at the very end of the period.

Figure 1. Overall trade volume via the Danish Sound, based on the number of passages, 1634–1857



Source: Sound Toll Registers.

Both Sweden and Portugal were states to be reckoned with in this period, with Portugal having a more extensive overseas empire. Moreover, in the eighteenth century, economic relations between Sweden and Portugal were significant. In Southern Europe and the Mediterranean, which was long-distance shipping for Sweden, Portugal was Sweden's most important trading partner, and the oldest Swedish consulate (founded in 1641) was in Lisbon.[17] During the eighteenth century, Portugal was the most important salt exporter for Sweden and the salt trade was a significant part of Portugal's foreign trade policy toward Sweden.[18] For Sweden it was salt and for Portugal naval stores that were considered strategic products.

In this bilateral trade some products were especially important in certain periods: in the 1720s, over 50 percent of Swedish wood board export went to Portugal, and in the mid-1750s a quarter of Setúbal's salt went directly to Sweden. During the seventeenth century, it was the Dutch shipmasters that carried the salt imports to Sweden, but Swedish mercantilist policy was to reduce foreign

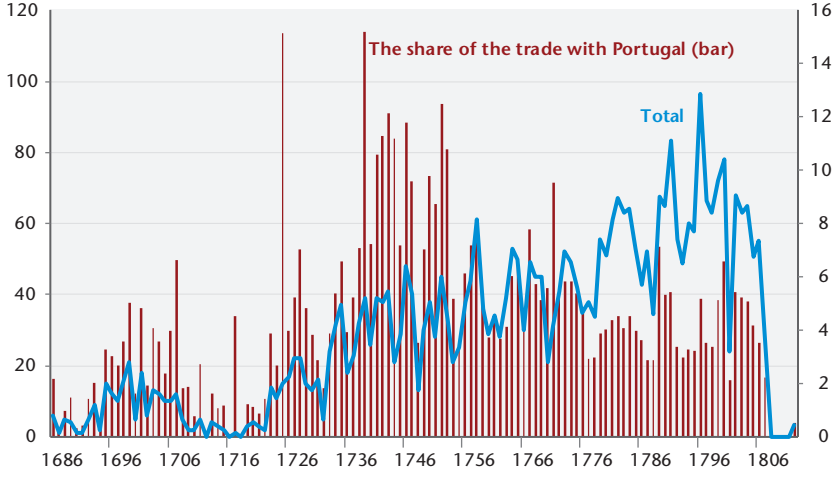
17. On Swedish-Portuguese trade, see especially Müller, 2004. See also Müller, 2008. Also, Lindberg, 2005.
18. On the Swedish salt trade, see especially Carlén, 1997.

shipping and Sweden managed to expand its own salt shipping from Portugal after the passing of the Navigation Act in 1724. Sweden increased its trade volumes and the range of traded goods by negotiating commercial treaties, paying a dole for safe passages, and in general by maintaining good political relations with the pirate states in Northern Africa.

Swedish–Portuguese shipping increased rather steadily in the course of the eighteenth century. While the Great Northern War, which lasted for almost the entire first quarter of the eighteenth century, interrupted some of those trade flows due to privateer activity, it was only a temporary setback. The number of ships sailing from Sweden to Portugal increased about fivefold from the late seventeenth to the late eighteenth centuries.

Both diplomatic and national sources correlate fairly well with the Sound Toll Registers: the eighteenth century was a period of significant growth for exchanges between these two countries. Moreover, it appears that Sweden increased its role in providing freight capacity in this trade, especially during the turbulent years of the Revolutionary and Napoleonic wars.

Figure 2. Share of Portugal in Swedish trade (right axis) and the number of Swedish merchant vessels traveling to Portugal (left axis), 1686–1815



Sources: Swedish Board of Trade, Sound Toll Registers (see also the text for details). See also Ojala *et al.* (2015), 'Assessing the Reliability' of the sources and calculations.

The Sound Toll Registers reveal that Swedish–Portuguese trade patterns were quite distinct. First of all, the ships engaged in this trade were more than 90 percent Swedish (including ships from Finland and Swedish dominions). Portuguese ship owners played only a minor part. In addition, it appears that exchanges consisted in a very select number of bulk commodities – Sweden's main export to Portugal was iron, and Portugal's main export to Sweden, salt. In fact, about 75 percent of the Swedish export cargo volume was bulk iron, while, according to the Sound Toll Registers, salt accounted for 99.1 percent of the cargo tonnage of Swedish imports, the remaining 0.9 percent being wine, fruit, sugar, and various luxury items.[19]

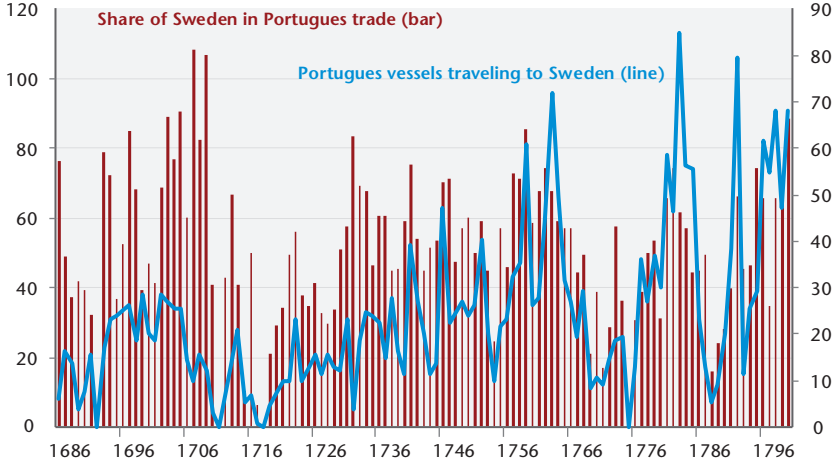
The trade between Portugal and Sweden was thus quite active, with almost 30 Swedish ships on average being annually employed in it. Still it did not yet have an established status as a routine trade as we were unable to find ships and shipmasters that specialized in it. From the Sound Toll Registers, it appears that the great majority of the Swedish captains sailed only occasionally to Portugal. As the total of 3,000 passages included over a thousand individual captains, few captains had frequent connections with southern Europe. When analyzing the shipping activity and routes of some of the captains who sailed to Portugal, their routes to and from Sweden appear to be diverse. Still, some shipmasters spent their careers almost entirely in the maritime trade to Portugal and southern Europe.[20] As seen in Figure 2, Portugal's significance for Swedish trade peaked in the mid-eighteenth century, and then started to decline. However, the number of ships traveling to Portugal continued to grow until the Napoleonic wars.

If we now look from the side of Portugal, the eighteenth century was also a growth period for trade, at least in terms of the number of ships traveling to Sweden (see Figure 3). However, the most

19. In the Swedish Board of Trade tables, the cargoes from Portugal to Sweden appear to be more diverse. However, even there salt made up a substantial proportion of the entire cargo volume.
20. The amount of data concerning shipmasters is vast, and because of the various ways of spelling names, treating it is laborious work. Therefore, our notes on the shipmasters are only preliminary. For instance, Stockholm captains like Anders Molitor, Rasmus Rahm and Oluf Berlin spent their careers sailing exclusively between Stockholm and Portugal (or the Mediterranean). Shipmaster Isach Hulst from Karlshamn sailed only between Amsterdam and Karlshamn in first half of his career, but then specialized in sailing between Karlshamn and Setúbal.

significant feature of this leg of the bilateral trade was not its growth but the considerable magnitude of its cyclical fluctuations.

Figure 3. Share of Sweden in Portuguese trade (right axis) and the number of Portuguese merchant vessels traveling to Sweden (left axis), 1686–1800



Source: Portuguese Balance of Trade, Sound Toll Registers (see also the text for details).

The trade between Sweden and Portugal was concentrated both geographically and in terms of the variety of products. In Sweden, 65 percent of this trade was carried to and from Stockholm, and in Portugal Swedish trade focused on the Lisbon area.[21] This was mainly due to the organization of domestic trade at the time through staple towns with rights to foreign trade and shipping in the mercantilist system. In the case of Sweden and Finland, the nature of ports did not make much difference – practically all towns had ports deep enough to accommodate international shipping. Moreover, vessels most commonly sailed first to Lisbon to sell their cargo of iron and then visited Setúbal to purchase salt cargo for the return journey.

21. The importance of ports has been measured by using Sound Toll Registers Online. Therefore, the Swedish ports on the North Sea coast were not involved in the calculations made in this article.

Table 1. Trade composition, measured from tonnage

Percentages of the total volume

Swedish exports to Portugal	%	Portuguese exports to Sweden	%
Iron	75.2	**Salt**	99.1
Steel	4.1	**Wine**	0.21
Timber	5	**Sugar**	0.08
Tar and Pitch	8.7	**Fruit**	0.003
Copper	0.3		
Miscellaneous	7.8	**Miscellaneous**	0.61
Average annual export tonnage	8,508 tons		14,171 tons

Source: Sound Toll Registers. See also Ojala et al (2015), 'Assessing the Reliability' of the sources and calculations.

There is one obvious phenomenon we can discern immediately in Swedish–Portuguese trade during the eighteenth century. Even though the trade expanded, it did not expand by becoming more diverse or including new products. On the contrary, bulk commodities dominated the trade in Portuguese and Swedish exports throughout the period. This observation seems to go against the idea that lighter and more sophisticated goods, such as sugar, coffee or wine, provided greater margins for merchants. Why did the share of these products not increase in the trade from Portugal to Sweden? The main explanation may be linked to the decline of real wages in eighteenth century Sweden. Although overall GDP rose during the century, due to notable population growth, per capita GDP declined. Even if the elites were still eager to buy foreign luxury items, the lower strata did not have the adequate purchasing power to do so. It is also possible that Portuguese luxury products became less competitive compared to the supply from nearby competitors, like France and Spain.

In Portugal, even if a majority of the cargoes were destined for Lisbon, other ports played a role by specializing in certain commodities: for instance most of the Swedish steel arrived in Porto. The exports of Swedish and Finnish tar and timber, both essential for shipbuilding and maintenance, went mostly to Lisbon. Lisbon also received the majority of valuable miscellaneous products such as building materials, manufactured goods, grain and dyes. However, times of war and other upheavals had a dramatic impact on trade flows of specific products. As can be seen from Table 2, for most of the last quarter of the eighteenth century

imports to Portugal from Sweden greatly exceeded exports. The cover rate fluctuated greatly due to the social and economic upheavals of the period. For example, in 1789, exports to Sweden plummeted. In 1798, imports fell, yet exports remained high. For most of the period, though, the overall volume of trade tended to grow quite vigorously, as seen in Figure 4.

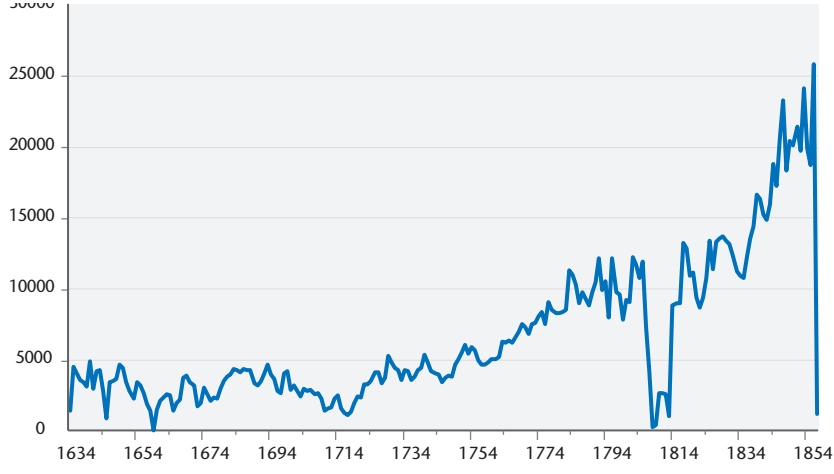
Table 2. Trade between Portugal and Sweden, 1776–1800

In Contos (one million réis) and as a percentage

	Imports (1)	Exports (2)	Cover Rate = (2) / (1) * 100
1776	155	28	18
1777	183	55	30
1783	456	98	21
1787	270	30	11
1789	382	16	4
1796	673	165	25
1797	634	159	25
1798	302	205	68
1799	1,496	237	16
1800	1,164	148	13

Source: Portuguese Balance of Trade.

Figure 4. Portuguese imports and exports with Sweden, 1776–1800



Source: Portuguese Balance of Trade.

As seen in Table 3, the Swedish share of Portuguese imports and exports fluctuated considerably in the 1780s and 1790s, due to the upheavals of the period. Quite naturally, wars offered both opportunities and challenges for external trade. More often than not, wars in which smaller nations were able to remain out of the conflict enabled them to explore new markets and serve as channels for important commodities for the feuding great powers (Moreira and Eloranta, 2011; Moreira, 2013). For example, 1783 saw a big increase in Sweden's role for Portugal, although this role was rather short-lived. The same happened in 1789 and 1799. While wars may have hurt trade flows among global powers in the aggregate sense, they did not necessarily have the same impact on smaller nations. The overall pattern is shown in Figure 5. Note that the cover rate jumped substantially during the turbulent 1790s.

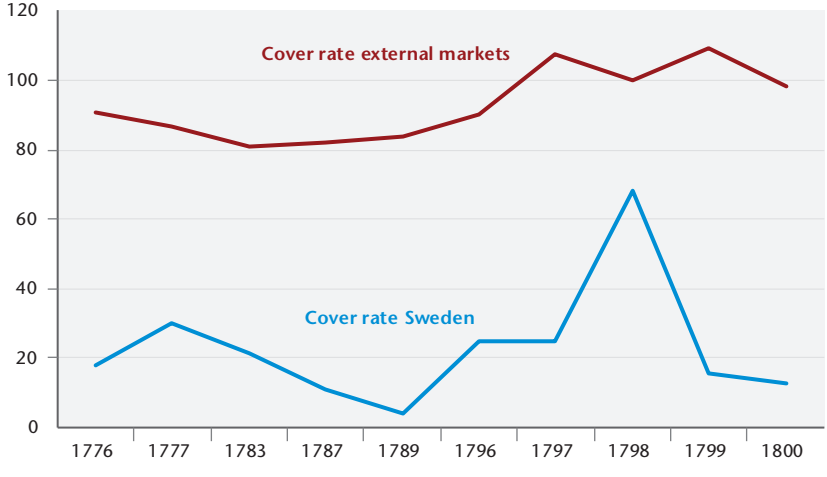
Table 3. Share of Swedish trade in Portuguese foreign trade

In %

	1776	1777	1783	1787	1789	1796	1797	1798	1799	1800
Share of imports	1.6	2.0	6.4	2.6	4.2	2.6	3.2	1.1	4.3	3.3
Share of exports	0.3	0.7	1.7	0.4	0.2	0.7	0.7	0.7	0.6	0.4

Source: Portuguese Balance of Trade.

Figure 5. Portuguese imports and exports with Sweden, 1776-1800



Source: Portuguese Balance of Trade.

In general, the bilateral trade with Portugal was a worthwhile business for Swedish vessels and captains. The ships had cargo to transport in both directions, and only in a few individual cases did the returning ships carry ballast in part.[22] One of the reasons that attracted Swedish ships to sail to Mediterranean ports was also the possibility of continuing freight shipping there during wintertime. The profits from bulk cargoes transported from Sweden to Portugal were fairly low, but this was compensated by the possibility of participating in the fairly profitable freight shipping during the period when the Baltic was iced over.[23]

There were a number of Swedish and Finnish ships engaged in the profitable freight carrying trades in the Mediterranean area already during the eighteenth century. By the turn of the century, this activity increased as there was rising demand for cargo carrying capacity with neutral flags during the ongoing Revolutionary and Napoleonic wars. Several of the Swedish ships entering and departing from Setúbal in the early nineteenth century were ordered to sail to a port other than a Swedish port. Of the 46 Finnish ships visiting Setúbal in 1800, 1801, and 1803, almost half were heading somewhere other than the Baltic. In this case, though, nine ships were bound for Gothenburg, which underscores the importance of this westernmost town for Swedish trade and shipping.[24]

During the eighteenth century, the bilateral trade between Sweden and Portugal increased significantly in absolute value, yet its proportion in the aggregate Swedish trade did not show a significant rise. After the War of Roussillon (1793–1795), the increase in Portuguese imports from Sweden was not only due to an upturn in the demand for Portuguese products, but also because Brazil was an important final destination for Swedish iron. Swedish iron had to be transported to Portugal because of the Colonial Pact. The increased Portuguese trade between the late eighteenth century and the beginning of the Peninsular War was, in essence, linked to the demand for Brazilian colonial products in the domestic and international markets. In turn, the growth of Swedish trade to Portugal was rather

22. Jeannin, 2002, discusses the ballast with which many ships left Holland for the Baltic.
23. Unfortunately, as Müller reminds us, the original sources do not provide sufficient data to analyze the importance of this Mediterranean tramp shipping (Müller, 2004; Müller, 2006).
24. Swedish National Archives, Board of Trade, Consular reports, Setubal 1800, 1801, 1803.

linear from the end of the Great Northern War to the early nineteenth century, and from the Sound Toll Registers, the revolutionary wars did not seem to have significantly altered this trend in either direction. Our other sources, though, indicate that Swedish freight carrying had been growing steadily during this period. The growth in Swedish shipping in terms of passages through the Danish Sound during the eighteenth century was about 140 percent, while shipping to Portugal increased 141 percent.[25] Thus, trade and shipping between Sweden and Portugal grew steadily, and was not hindered significantly by the conflicts of the period or changes in market conditions. The bilateral trade was fundamentally useful to both parties, and the turmoil of the period changed domestic demand for their respective products very little.

4. Conclusions and further challenges

The pattern of bilateral trade between Portugal and Sweden in the long eighteenth-century indicates that the two countries were not equally dependent on their bilateral trade – this trade was more important to Sweden than to Portugal, since the latter had more extensive colonial markets to rely on. However, certain products such as tar, timber, salt, and wine dominated trading relations. Overall, trade volumes and the number of ships traveling to each nation tended to grow over time, although this growth was uneven. For Portugal, the aggregate trade tended to develop in a cyclical fashion, possibly driven by domestic market fluctuations and residual effects of conflicts, whereas the Swedish trade with Portugal peaked in the middle of the eighteenth century, only to decline during the tumultuous years at the close of the century. It seems that the Revolutionary and Napoleonic Wars particularly impacted Swedish trade as they hindered the use of the Danish Sound. The Portuguese, who had to endure brutal fighting during the Peninsular War, were able to turn to their colonial connections and Atlantic markets during these conflicts.

The analysis of international trade has focused too much on trade by great powers and, respectively, disruptions caused by great power conflicts. With the availability of new sources of informa-

25. Estimated by comparing the averages in the periods 1723–1727 and 1796–1800.

tion on trade, such as the Sound Toll Registers, we can now analyze international trade flows more effectively. Based on this article and our other work, we believe the Sound Toll Registers, in general, correspond fairly well with national historical sources on trade. By combining these records we can analyze bilateral trade in a much more comprehensive manner. It seems that trade between smaller nations – and most likely between neutral states and great powers – actually thrived despite the international turmoil. This was clearly the case for Swedish–Portuguese maritime trade. Here we cannot go further into the discussion of smaller states' roles during conflict periods and the impact on trade – however, it is clear from this data that bilateral (and surely multilateral) trade relationships were affected by the conflicts of the period. In general the trade between smaller states like these offered opportunities to engage in trade while the great powers fought for supremacy. Thus the impact of warfare as a negative force in economic transactions is a complex phenomenon to be analyzed from different angles, including the smaller and/or neutral states.

While we can reach such conclusions based on the available data, there are still limitations to this study. First of all, the records are more complete on the Swedish side, and the Napoleonic conflicts did not have an equally devastating impact on them. Second, the issues of measurement and conversion are quite daunting – here we have not gone into great detail about them. Fortunately, there is now more and more information about conversions into common units and currencies. Third, it is not necessarily very telling in itself to look at bilateral trade flows. Most nations are engaged in multilateral trade networks, and the study of such networks holds great promise. Here we simply provide some initial findings in the study of early modern Swedish and Portuguese trade.

References

Acemoglu, D., Johnson, S., and Robinson, J., (2005), "The rise of Europe: Atlantic trade, institutional change, and economic growth." *American Economic Review*: 546–79.

Ahonen, K., (2005), *From Sugar Triangle to Cotton Triangle: Trade and Shipping between America and Baltic Russia, 1783–1860*. Jyväskylä: Jyväskylän yliopisto.

Allen, R. C., (2001), "The great divergence in European wages and prices – from the Middle Ages to the First World War." *Explorations in Economic History,* 38.

Blussé, L., (1996), "No boats to China. The Dutch East India Company and the changing pattern of the China Sea trade, 1635–1690." *Modern Asian Studies*, 30(01): 51–76.

Bonney, R., (1999a), "Introduction" In *The Rise of the Fiscal State in Europe C. 1200–1815*, R. Bonney, Oxford: Oxford University Press, 1–17.

Bonney, R. ed., (1999b), *The Rise of the Fiscal State in Europe C. 1200–1815*. Oxford: Oxford University Press.

Braudel, F., (1995), *The Mediterranean and the Mediterranean World in the Age of Philip II*. University of California Press.

Carlén, S., (1997), *Staten som marknadens salt: en studie i institutionsbildning, kollektivt handlande och tidig välfärdspolitik på en strategisk varumarknad i* övergången *mellan merkantilism och liberalism 1720–1862*. Stockholm.

Carlos, A. M. and Stephen, N., (1988), "'Giants of an Earlier Capitalism': The chartered trading companies as modern multinationals." *Business History Review* 62(03): 398–419.

Denzel, M. A., (2010), *Handbook of World Exchange Rates, 1590–1914*. Burlington: Ashgate.

Edvinsson, R., (2011), "New estimates of Swedish GDP by activity 1665–2010." *Stockholm Papers in Economic History* 12.

Ferguson, N., (2001), *The Cash Nexus: Money and Power in the Modern World, 1700–2000*. New York: Basic Books.

Ferguson, N., (2003), *Empire: The Rise and Demise of the British World Order and the Lessons for Global Power*. New York: Basic Books.

Findlay, R. and O'Rourke, K., (2007), *Power and Plenty: Trade, War, and the World Economy in the Second Millennium*. Princeton: Princeton University Press.

Gøbel, E. and Hansen, U. F., (2007), "Denmark" in *Baltic Connections: Archival Guide to the Maritime Relations of the Countries around the Baltic Sea (including the Netherlands) 1450–1800 Vol. 1*, L. Bes, E. Frankot, and H. Brand (eds.), Leiden. 25-86.

Harding, R., (1999), *Seapower and Naval Warfare from 1650–1830*. London: UCL Press.

Harley, C. K., (1988), "Ocean freight rates and productivity, 1740–1913: the primacy of mechanical invention reaffirmed". *Journal of Economic History* 48.

Hart, M., (1999), "The United Provinces, 1579–1806." In *The Rise of the Fiscal State in Europe C. 1200–1815*, R. Bonney. Oxford: Oxford University Press.

Heckscher and Boethius, (1938), *Svensk handelsstatistik 1637–1737*. Stockholm.

Hejeebu, S., (2005), "Contract Enforcement in the English East India Company." *The Journal of Economic History* 65(02): 496–523.

Historisk statistik for Sverige. Del 3 Utrikeshandel, 1972. Stockholm. 79–80.

Hoffman, P. T., (2011), "Prices, the military revolution, and Western Europe's comparative advantage in violence." *The Economic History Review* 64(01): 39–59.

Hoffman, P. T., (2012), "Why was it Europeans who conquered the world?". *The Journal of Economic History* 72(03): 601–633.

Högberg, S., (1969). *Utrikeshandel och sjöfart på 1700-talet*. Stockholm.

Jacks, D. S., O'Rourke, K. H., and Williamson, J. G., (2011), "Commodity price volatility and world market integration since 1700." *Review of Economics and Statistics*. 93(3): 800–813.

Kennedy, P., (1976), *The Rise and Fall of British Naval Mastery*. London: A. Lane.

Jeannin, P., (2002), "Les villes hanséatiques dans le commerce européen du XVIII[e] siècle", *Marchands d'Europe*, p. 79–107.

Kennedy, P., (1989), *The Rise and Fall of the Great Powers. Economic Change and Military Conflict from 1500 to 2000*. London: Fontana.

Lawson, P., (2014), *The East India Company: A History*. Routledge.

Lindberg, E., (2005), "An eighteenth century Swedish perspective on the Portuguese salt industry. With trade and production figures." In *Actas I Seminário Internacional sobre o sal português*. Porto.

Maddison, A, (2010), *Historical Statistics of the World Economy*.

Magnusson, L., (2000), *An Economic History of Sweden*. London: Routledge.

Modelski, G. and Thompson, W. R., (1988), *Seapower in Global Politics, 1494–1993*. Houndmills, Basingstoke, Hampshire: Macmillan Press.

Moreira, M. C. and Eloranta, J., (2011), "Importance of 'weak' States during conflicts: Portuguese trade with the United States during the Revolutionary and Napoleonic Wars." *Revista de Historia Económica* 29(03): 393–423.

Moreira, M. C., (2013), *Relaciones comerciales luso-españolas, 1774–1860*. Madrid, Editorial Académica Española.

Müller, L., (2003), "The Swedish East India trade and international markets: Re-exports of teas, 1731–1813." *Scandinavian Economic History Review* 51(3): 28–44.

Müller, L., (2004), *Consuls, Corsairs, and Commerce: The Swedish Consular Service and Long-Distance Shipping, 1720–1815*. Uppsala: Uppsala Universitet.

Müller, L., (2006), "The Swedish consular service in southern Europe, 1720–1815" *Scandinavian Journal of History* 31(2): 186–95.

Müller, L., (2008), "Swedish–Portuguese trade and Swedish consular service, 1700–1800." In *A articulação do sal Português aos circuitos mundiais antigos e novos consumes*, I. Amorim (ed.). Porto.

Müller, L., (2012), "The forgotten age of swedish shipping: The eighteenth century." *International Journal of Maritime History* 24(2): 1–18,

North, D. C., (1958), "Ocean freight rates and economic development 1750–1913" *Journal of Economic History* 4.

North, D. C., (1966), *The Economic Growth of the United States, 1790–1860*. New York: Norton.

Ojala, J. and Karvonen, L., (2013), "Scandinavian trade flows with the smaller and medium-sized states in the 18th and 19th centuries - Swedish–Portuguese trade in 18th century". In *APHES conference*. Braga.

Ojala, J., Karvonen, L., Moreira, M. C., and Eloranta, J., (2015), "Assessing the reliability of the Sound Toll Accounts: comparing the data in the Swedish and Portuguese sources." In *The Baltic in European Maritime History, 1600–1800*, J.W. Veluwenkamp and W. Scheltjens (eds.). Forthcoming.

O'Rourke, K. H. and Williamson, J. G., (1994). "Late nineteenth-century Anglo-American factor-price convergence: were Heckscher and Ohlin right?" *The Journal of Economic History* 54(04): 892–916.

O'Rourke, K. H. and Williamson, J. G., (2002a), "After Columbus: explaining Europe's overseas trade boom, 1500–1800." *The Journal of Economic History* 62(02): 417–456.

O'Rourke, K. H. and Williamson, J. G., (2002b). "When did globalisation begin?" *European Review of Economic History* 6(1): 23–50.

Scheltjens. W., (2009), "The volume of Dutch Baltic shipping at the end of the eighteenth century: a new estimation based on the Danish Sound Toll Registers." *Scripta Mercaturae* 43(1): 74–102.

Tielhof, M. van, (2002), *The 'Mother of All Trades': The Baltic Grain Trade in Amsterdam from the Late Sixteenth to the Early Nineteenth Century*. Leiden: Brill Academic Publishers.

Valleröd, R., (1969), *Svensk handels- och sjöfartsstatistik 1637–1813*. Stockholm.

Whaples, R., (1991), "A quantitative history of the Journal of Economic History and the cliometric revolution." *The Journal of Economic History* 51(2): 289–301.

Whaples, R., (2002), "The supply and demand of economic history: recent trends in the Journal of Economic History." *The Journal of Economic History* 62(2): 524–532.