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Direct supplies of timbers from the southern Baltic region for the Spanish Naval Departments during the second half of the 18th century¹**Keywords:** Spanish shipbuilding, South Baltic region, timber supply, wood commerce, XVIII century**INTRODUCTION**

The main idea of proposing this article is to demonstrate the importance of the European peripheries as important centers of natural supplies used by the European powers of the 18th century (Great Britain, France, Holland and, in this particular case, Spain) for development of their Royal Navies, which were the first support of their expansionist and colonialist policies. With this it is important to reveal the efforts of the Spanish Crown to restore and maintain its naval power in the Atlantic world during the 18th century. This paper is a first approximation to resolve questions about the commercial strategies of Spain to acquire the European natural resources, which strengthened the growth of its Royal Navy. The general proposal of the research is to analyze the issue of a direct timber trade from the South Baltic region, it means territories currently occupied by Germany, Poland, Russia and Lithuania, between the ports of Lübeck and Klaipėda-Memel (Map 1); nevertheless in this article I will present mostly a case of actual Polish shores and some comparisons with other ports in the region.

¹ This paper is the result of the project „The role of wood supplies from the southern Baltic region and the viceroyalty of New Spain in the development of the Spanish seaborne empire in the 18th century”, which is developed at Warsaw University with financing of the National Science Center, Poland; register number: 2017/25/B/HS3/01017.

It is a common place in Spanish historiography² to mention about wood from the Baltic or Northern Europe without further delving into specific issues as contractors, reports and inspections of hills, cut timbers, transport of forest goods, etc. This absence of precision has made it necessary to increase that unknown space still existing in historical studies. Therefore, during the last years, I have been conducting archived research in Poland and Spain where the first tracks on this subject were found. Especially, in the case of the South Baltic, the Sound Toll records were useful³, where I could find and systematize information about the maritime movement of vessels coming from the South Baltic region, their cargo, personal data of captains as well as the ports of origin and destination in Spain between 1700 and 1799.



Map 1. Principal ports with the southern Baltic region which participated in the direct commerce with Spain during the 18th century

Source: Own elaboration based on the *Google Earth Pro* software.

- 2 For example: Juan Torrejón Chaves, Ana Crespo Solana, Gervasio de Artiñano y Galdácano, Gaspar de Aranda, Alfredo Martínez González, Álvaro Aragón Ruano, Lourdes Odriozola Oyarbide, María Baudot Monroy, Rafael Torres Sánchez, Iván Valdez Bubnov, Manuel Díaz Ordoñez.
- 3 The toll registers of the Sound Strait (Denmark) are accessible on the Internet: <http://www.soundtoll.nl/index.php/en/over-het-project/str-online>.

On the other side, the abundant Polish bibliography⁴ that mainly concerns the Gdansk trade issue mentions wood shipments to Spain but without precision. It is also important to underline that according to the documentation so far reviewed it turns out that the merchants of the South Baltic ports did not show great enthusiasm for trade with the Iberian Peninsula, arguing for high costs, attacks by privateers and lack of ships⁵. Some mention about these difficulties can be found in letters of the Count of Aranda, the ambassador of Spain in Poland, sent from Warsaw to Secretary of State Ricardo Wall between the years 1760 and 1762 when he described his interview with town council and traders from Gdansk. A similar lack of enthusiasm observed Gaziński in the case of merchants from Stettin, who since 1719 were pressed by the Prussian king, Frederick William I to boost major commercial activity with the Iberian Peninsula⁶. Perhaps for this reason Polish and other regional historians didn't pay attention to the analysis of trade with Spain, which was not significant in comparison with other countries like Holland, the United Kingdom, Sweden, Denmark and France.

However, despite the scarcity of historiographical sources on the South Baltic woods and the initial state of archival research in this article, it is intended to present the clues and possible paths that must be developed in the coming months and years.

Finally, it can be mentioned that the first step to approach the subject of direct trade between the southern Baltic and Spain, the author of this article made in the other text entitled "El comercio directo de maderas para la construcción naval española y de otros bienes provenientes de la región del Báltico sur, 1700–1783", where he exposes the geopolitical issues of the region and the general commercial movement between the years 1700 and 1783⁷.

GEOPOLITICAL AND ECONOMIC CONTEXT OF THE SOUTHERN BALTIC HINTERLAND

This section aims to present the geopolitical and economic conditions of this region to understand its strategic location in the local and external State policies, which used the potential of wood and grain production to develop their expansionist policies. The

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- 4 Maria Bogucka, Andrzej Groth, Edmund Cieślak, Jerzy Trzoska, Zbigniew Binerowski, Henryk Leśniński, Czesław Biernat, Stanisław Gierszewski, Henryk Samsonowicz, Zenon Guldon, Jerzy Fedorowicz.
 - 5 Cezary Taracha, "Jeszcze o gdańskiej misji Pedra Arandy w 1761 roku", *Rocznik Gdański*, 56/2 (1996): 18.
 - 6 Radosław Gaziński, *Handel morski Szczecina w latach 1720–1805* (Szczecin: Uniwersytet Szczeciński, 2000), 276–277.
 - 7 Rafał Reichert, "El comercio directo de maderas para la construcción naval española y de otros bienes provenientes de la región del Báltico sur, 1700–1783", *Hispania. Revista Española de Historia*, 76–252 (2016): 129–157.

main territories of the *Hinterland* of these ports, like Stettin, Gdansk, Königsberg, Pillau and Memel, were connected by the navigable rivers: the Oder with their main creek the Warta; the Vistula with her navigable creek the Bug; and two important rivers from the East: the Pregolya and the Neman, which related the region of actual Belarus to the Baltic sea. All these waterways formed a network that connects distant geographical regions from Brandenburg, Silesia, the Tatra Mountains, the Polish grasslands to Polesie, with important commercial centers in Wroclaw, Opole, Frankfurt, Poznan, Cracow, Warsaw, Torun, Elblag, Grodno, Kaunas and Vilnius (map 2).

The geopolitical situation of this great area in the 18th century is very dynamic, and convulsed, with political and economic conflicts. Into this ambient atmosphere emerged new European powers (Prussia and Russia) and also the disintegration of the Commonwealth of Poland and Lithuania started. What had crucial significance in this process was the Great Northern War (1701–1721), in which the alliance between the kingdoms of Denmark and Norway, Russia and Prussia was formed against Sweden. This was the conflict in which Poland and Lithuania were involved through the ambition of his young king Augustus II the Strong, who signed the treaty with Russia by Peter the Great in 1704. The defeat provoked the occupation of Polish territory by the army of Charles XII of Sweden and the abdication of the Polish king in 1706. This situation benefited the Russian Tsar, who after the victory in the battle of Poltava (8 July 1709), took the initiative in the war and finally defeated the Swedish king. In the case of the Commonwealth, from that moment began the progressive political dependence of Russia that finally ended in three partitions of the Polish-Lithuanian territory and its complete disappearance in 1795. This political context is very important because the goods that came to the ports from Stettin to Memel mostly came from the ancient territories of the Commonwealth of Poland and Lithuania. That situation of land occupations and port blockades caused the interruption in the commercial exchange that took place through the main ports of the South Baltic during the belligerent conflicts, as were the cases of Stettin and Gdansk during the Great Northern War. For example, between 1711 and 1720, the Russian squadron, composed of between two and five warships, commanded by Franz Vilbois, was installed in the Gdansk roadstead. Its purpose was to obstruct the lucrative trade of this port with Sweden. The Scandinavians responded to this reprisal with attacks by their corsairs on ships carrying the Gdansk flag⁸.

8 Jerzy Trzoska, *Żegluga, handel i rzemiosło w Gdańsku w drugiej połowie XVII i XVIII wieku*, (Gdańsk: Uniwersytet Gdański, 1989), 21.



Map 2. The ports, the capitals and the trading cities in the area of studies

Source: Own elaboration based on the *Google Earth Pro* software.

It must be emphasized that the 18th century is the epoch of rapid economic development of Prussia, the Commonwealth of Poland-Lithuania and also Russia. The latter looked for developing its commercial network through the Baltic ports in Kronstadt, Saint Petersburg, Narva (from 1704) and Tallinn (from 1710).

Talking about the economic situation of the Commonwealth, it is important to know that it was dominated by feudal agriculture based on the plantation system. Typically, a nobleman's landholding comprised a *folwark*, a large farm worked by serfs to produce surpluses for internal and external grain trade, which started to grow in the sixteenth century. From those moments the Poland and Lithuania union played a significant role in the grain supplies for Western Europe and also other goods (pelt, linen, hemp and forest material)⁹. However, the economic growth did not influence on administrative, political and military reforms, that could secure the peaceful development of the Polish-Lithuanian state. Looking at the example of Prussia and Russia, it can be seen that these basic changes had a positive consequence in the construction of their superpower position.

⁹ Krzysztof Olszewski, *The Rise and Decline of the Polish-Lithuanian Commonwealth due to Grain Trade*, (Venice: Ca'Foscari University of Venice, 2007), 6-8.

Those neighboring countries of the Commonwealth in the first half of the 18th century laid down a greater role to strengthen themselves through administrative reforms (division into district), which in turn were intended to reinforce the military organization of the States. For example, in 1721 Frederick Wilhelm I introduced the duty of military service, which allowed the increase of the mobilization capacity of the Prussian army. The state was divided into cantons, from where recruits were enlisted. Most of the administrative officials were active soldiers or army veterans. In contrast to the Poland and Lithuania union, since the 18th century representatives of the Prussian and Russian nobles were obliged to carry out military service, a fact which allowed them to prepare officers and introduce discipline, which the gentry from the Commonwealth lacked. This, in relation to the growing military strength of Prussia and Russia, was a negative feature that influenced the later military dependence of both these countries and the weakness of the Polish-Lithuanian army¹⁰.

DIRECT TRADE OF A FOREST SUPPLY FROM THE SOUTHERN BALTIC WITH SPAIN

As previously mentioned, in the Sound Toll registers for the period from 1700 to 1799, we have discovered 1,973 ships which sailed from one of the southern Baltic ports through the Danish Straits toward Spain. Table 1 shows the maritime traffic between these two regions divided into four main categories: 1) Grain; 2) Wood for naval construction; 3) Mixed and other cargoes and 4) Wood for building barrels. As you can see, the product that has been registered the most times is grain (613 vessels), which amounts to 31.07%; in second place there were those who transported wood for the needs of shipbuilding (542 ships), which amounts to 27.47%; in the third place there are registers of ships that carried varied goods, but we can also find small amounts of grain and wood of all types (471 ships), which amounts to 23.87%. The last product with a high registration coefficient was wood for building barrels (347 vessels, 17.59%). However, summing all vessels with wooden cargo both for the needs of the shipbuilding industry and barrel manufacture it gives a total value of 45.06% of all maritime registered in Sound Toll originating from the southern Baltic ports (Diagram 1).

10 Jerzy Topolski, *Gospodarka polska a europejska w XVI-XVIII w.* (Poznań: Wydawnictwo Poznańskie, 1977), 158.

Table 1. Total ships number that sailed from the southern Baltic to Spain and registered in the Sound Toll (1700–1799)

Period					
	Wood for naval construction	Wood for build barrels	Grain	Mixed and other cargoes	Total
170–1709	0	0	0	5	5
1710–1719	0	0	3	3	6
1720–1729	1	3	0	1	5
1730–1739	0	6	3	2	11
1740–1749	5	51	0	14	70
1750–1759	53	67	30	72	222
1760–1769	33	73	36	62	204
1770–1779	179	41	60	103	383
1780–1789	202	53	178	149	582
1790–1799	69	53	303	60	485
Total	542	347	613	471	1973

Source: Reichert, "El comercio directo" and the Sound Toll microfilms: 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, and 278.

Analyzing the direct maritime traffic between the two regions, it can be seen that during the first four decades of the 18th century it practically did not exist (27 ships registered) and only from this decade it began to gain strength and develop until the end of the century. This situation was mainly caused by the unstable geopolitical situation in the South Baltic region. The Great Northern War (1700–1721), the War of the Polish Succession (1733–1735) and the War of the Austrian Succession (1740–1748), which broke out almost at the same time as the war of the *Asiento* (1739–1748); these conflicts affected the limitation of access to the major ports of the southern Baltic, where, as in the case of Wismar, Szczecin and Gdansk, these cities were besieged and cut off from their natural base. In the case of West Pomerania and East Prussia, there is also a royal order restricting (1709, 1720 and 1736) the import of goods from the territories of Poland and Lithuania, the *Hinterland* for Memel, Königsberg and Szczecin, this last city was involved in the trade with Wielkopolska from where wheat and rye was obtained¹¹.

Moreover, in the first half of the century Spain was also in the process of reconstructing its administrative, economic, military and naval power, so it can be assumed that it showed no great interest in the supplies of the southern Baltic. However, as can be seen in Table 1, this trend changes and until the end of the century there is

11 Gaziński, *Handel morski*, 117–119 and Andrzej Groth, "Port w Królewcu: jego funkcje i zaplecze w XVI–XVIII wieku", *Słupskie Studia Historyczne*, 13 (2007): 199–203.

a growing direct trade, with its peak in the 1780s. When talking about the forest supplies for Spanish shipbuilding the first person who sought to engage in direct maritime movement with the South Baltic was the Secretary of the Royal Navy, Marques de la Ensenada (1737–1754), who after the decision to regulate a forest law by the Forests Ordinance (1748), where it was intended to promote plantations in the territory of the metropolis of trees for the Navy, did not reach its objective because those prohibitions caused the opposite effect, that planters and peoples opposed the State. This conflict caused a sharp decrease in internal forest supplies for the Navy, forcing the Crown to look for timber in the Baltic and the West Indies¹².

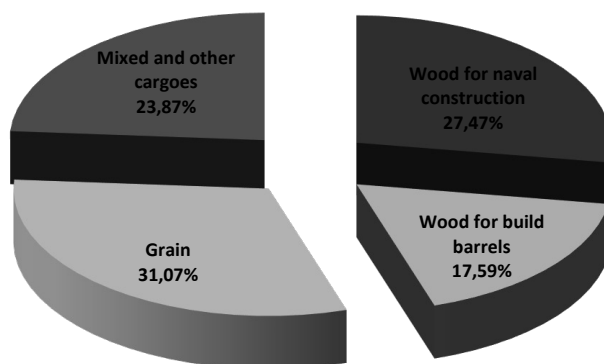


Diagram 1. Percentage distribution for goods from the South Baltic and registered in the Sound Toll (1700–1799)

Source: Reichert, “El comercio directo” and the Sound Toll microfilms: 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, and 278.

One example of it is a correspondence of the Count of Aranda, the ambassador of Spain in Poland, which was sent from Warsaw to Secretary of State Ricardo Wall between the years 1760 and 1762. The royal official repeatedly expressed his great interest in promoting trade between the southern Baltic region and Spain; he mentioned that the main branches of the Polish economy focused on the cultivation of cereals and the felling of timber. In addition, he set out to travel to Gdansk/Danzig to talk to the city’s Assembly and the most powerful merchants in order to encourage them to open up to greater collaboration with the Spanish. His initiative failed because the merchants showed no great interest in sending their ships beyond the English Channel, arguing that it was not economically convenient for them and, furthermore, claimed that on the route through French waters they were exposed to attacks by pirates and corsairs from other nations. However, that trip from Aranda also provided valuable

12 Rafael Torres Sánchez, “Administración o Asiento. La política estatal de suministros militares en la monarquía española del siglo XVIII”, *Studia Historica: Historia Moderna*, 35 (2013): 193.

information about his effort to establish a contract with merchants in Gdansk with the aim of obtaining supplies for the Royal Navy. When the ambassador returned to Warsaw in September 1761 he wrote a memo to the Secretary of the Navy, Julián de Arriaga, explaining that he was negotiating with Gdansk's most powerful ship owner, Gabriel Gottlieb Schultz, who had permission to trade the masts that were in the Russian port of Kronstadt and came from St. Petersburg. The transaction was not concluded because the ship owner of Gdansk did not want to lend his boats to make the complete trip from the Russian port to Spain; he only offered to „commission for purchases and expeditions”¹³. It must be said that since the 1740s the Schultz family had tried to establish commercial links with France and Spain to supply the Southern Baltic woodlands. This attempt had some success when Jan Filip Schultz persuaded the King of Poland, Augustus III, to grant contracts to the merchants of Gdansk to trade the timber of the royal forests with these countries¹⁴.

In fact, since 1742, the direct trade of timber from the southern Baltic gradually began to ascend and had its greatest peak during the administrations of the secretaries of Marina Pedro González Castejón and Antonio Valdés, when in the toll books of the Strait of Sound were registered 440 vessels loaded with timbers (Table 1)¹⁵. Interestingly, and according to the records of the Sound Toll (Table 2), between the years 1750–1779, the most timber was sent to Spain from Gdansk (123 registers), and the domination of Prussian ports began in 1770–1799, when the largest timber transports were sent from Memel (250 registers).

Table 2. Number of ships departing with wood cargoes from five important ports of the southern Baltic region to Spain and registered in the Sound Toll (1700–1799)

Period							Total
	Gdansk/ Danzig	Szczecin/ Stettin	Klaipėda/ Memel	Kaliningrad/ Königsberg	Baltisk/ Pillau	Other ports	
1700–1709	0	0	0	0	0	0	0
1710–1719	0	0	0	0	0	0	0
1720–1729	0	1	0	0	0	0	1
1730–1739	0	0	0	0	0	0	0
1740–1749	5	0	0	0	0	0	5
1750–1759	41	10	0	1	0	1	53

13 Cristina González Caizán, Cezary Taracha, Diego Téllez Alarcia, *Cartas desde Varsovia. Correspondencia privada del Conde de Aranda con Ricardo Wall (1760–1762)*, (Lublin: Werszet, 2005) and Taracha, “Jeszcze o gdańskiej misji”, 18.

14 Jerzy Trzoska, *Żegluga, handel i rzemiosło*, 167.

15 Reichert, “El comercio directo”, 148–150 and the Sound Toll microfilms: 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277 y 278.

Period							
	Gdansk/ Danzig	Szczecin/ Stettin	Klaipėda/ Memel	Kaliningrad/ Königsberg	Baltisk/ Pillau	Other ports	Total
1760–1769	16	7	3	7	0	0	33
1770–1779	66	20	59	19	7	8	179
1780–1789	12	10	144	21	9	6	202
1790–1799	12	2	47	5	3	0	69
Total	152	50	253	53	19	15	542

Source: Reichert, "El comercio directo" and the Sound Toll microfilms: 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, and 278.

Probably this increased importance of the Prussian ports (Stettin, Königsberg, Memel and Pillau) in overseas trade is also due to the weakening position of the United Kingdom in the Baltic region. At that time Great Britain was focusing all its strength in the Seven Years' War (1756–1763) against France and Spain. In the decade between 1760 and 1769, Prussian trade strongly competed with the Swedish and Polish. It can be supposed that, during the 1780s, the Spanish Naval Secretary was interested in the development of timber trade with Prussia and Russia, which confirms the voyage of the captain Tomas de Gayangos, whom between October 1786 and June 1787 was commissioned to visit different ports of Prussia, Poland and Russia to review the wood classes and conditions that were stocked in them. In his report he concluded that the pine sent from the Polish forests to Gdansk, Königsberg and Memel was of a higher quality than that offered by the Prussians because it had a good weight and resins. The captain, on his trip to Saint Petersburg, visited Riga, where he recognized the good quality of the pines stored there to elaborate masts. Finally, during his stay in Kronstadt he observed that the pine for masts from the Kazan mountains (Russia) was still superior to that from Riga, but was exclusively for the use of the Russian Navy and was not commercialized¹⁶.

16 Juan Torrejón Chaves, "La madera báltica, Suecia y España (siglo XVIII)", w: *Comercio y Navegación entre España y Suecia (siglos X-XX)*, ed. Alberto Ramos Santana et al. (Cádiz: Universidad de Cádiz, 2000), 166, 180, 186–191.

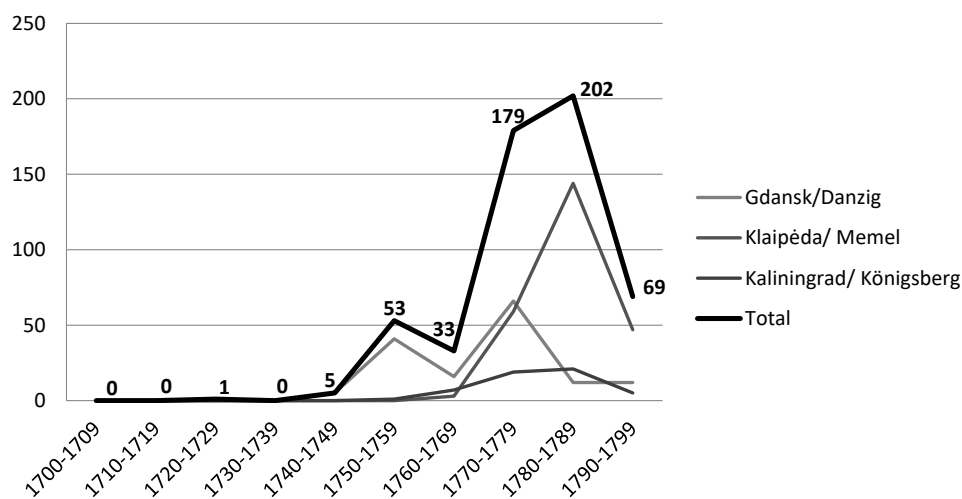


Diagram 2. Number of ships from Gdansk, Memel and Königsberg which sailed from timber to Spain and registered in the Sound Toll (1700–1799)

Source: Reichert, "El comercio directo" and the Sound Toll microfilms: 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, and 278.

Observing the percentage share in direct timber trade (Diagram 3) between the southern Baltic ports and Spain, it can be seen that Memel, which dispatched 253 ships (46.68% of the total timber), had the largest share in it. Significantly more than half of them (144 ships) were sent in the eighties of the 18th century. In second place was Gdansk, which dispatched 152 ships (28.04%). The next places were taken by Königsberg (9.78%), Stettin (9.23%) and Pillau (3.51%). From other ports in the region like Lübeck, Wismar, Wolgast, Rostock, Swinemünde, Kolberg and Stolp, a total of 15 vessels sailed (2.77% of the total).

It is worth mentioning that the port in Memel was practically geared to sending ships with timber for the needs of shipbuilding, because of all the ships registered in the Sound Toll from this city to Spain (349 ships) marks that 72% of them carried timber for shipbuilding. In other cases, this share accounted for 18 to 28% (Stettin, Gdansk and Königsberg), which indicates that they have led to more diversified trade and also offered different products like grain, hemp, linen and wood for barrels. One opposite example to Memel is Wismar, where 69 vessels carried grain and only four had different cargoes (6% of the total)¹⁷.

¹⁷ Reichert, "El comercio directo" and the Sound Toll microfilms: 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, and 278.

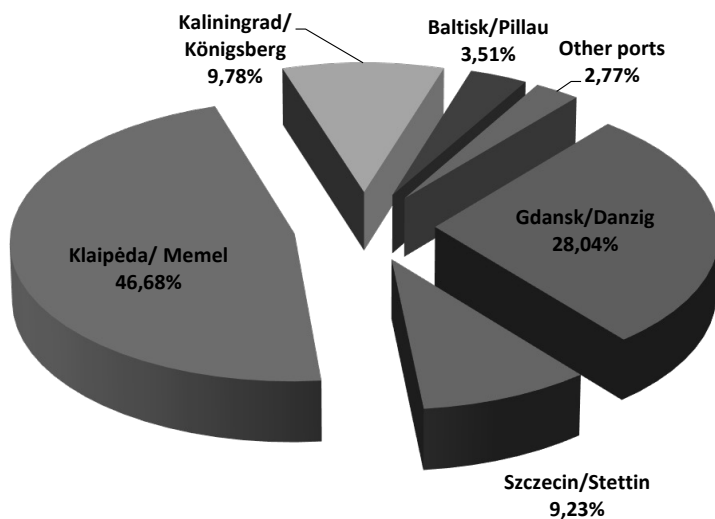


Diagram 3. Percentage distribution of main South Baltic ports in the direct wood commerce from Spain and registered in the Sound Toll (1700–1799)

Source: Reichert, “El comercio directo” and the Sound Toll microfilms: 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, and 278.

Finally, it is important to know the Spanish ports where the wood for shipbuilding was to be transported. According to the records from Sound Toll, 330 ships (60.89% of the total) went to Cadiz (Diagram 4). This number shows that this Andalusian port was the most important destination for ships carrying timber. However, at this stage of the research, it is not possible to confirm whether all wood was handed over to the arsenal of La Carraca or just part of it, and the rest was sent to other arsenals (La Habana and Cartagena) or shipyards. However, this is quite likely because the port of Cadiz has been often just a transshipment port for goods that were distributed from it to the West Indies, the Mediterranean and the Cantabrian Seas¹⁸.

Another place where the wood got arrived was El Ferrol, where 105 ships (19.37% of the total) arrived. It was one of the most famous arsenals and shipyards during the 18th century, where the most ships were built for the needs of the Spanish Royal Navy. An interesting fact is that over 60% of all received timber went to this port in the 1770s. In this decade, 42 ships were constructed, of various types (among others: *La Concepción* with 114 cannons launched in 1779, 13 frigates with 28 or 34 cannons and 6 ships

18 Ana Crespo Solana, “El comercio holandés y la integración de espacios económicos entre Cádiz y el Báltico en tiempos de guerra (1699–1723)”, *Investigaciones de Historia Económica*, 8 (2007): 47.

of the line with 74 or 80 cannons)¹⁹. According to Luis Guitián Rivera, the shipyard of El Ferrol for the construction of one ship of the line with 74 cannons needed about 16,000 cubits of cubic²⁰ wood, and for the construction of a frigate for 36 cannons about 6,500 cubits of cubic wood²¹.

Table 3. Number of ships arriving with wood cargoes to the Spanish arsenal and ports from the southern Baltic region and registered in the Sound Toll (1700–1799)

Period								
	Cadiz	El Ferrol	Cartagena	Santander- Bilbao- San Sebastian	Malaga	Seville	Other ports	Total
1700–1709	0	0	0	0	0	0	0	0
1710–1719	0	0	0	0	0	0	0	0
1720–1729	1	0	0	0	0	0	0	1
1730–1739	0	0	0	0	0	0	0	0
1740–1749	5	0	0	0	0	0	0	5
1750–1759	19	19	3	8	3	0	1	53
1760–1769	24	5	4	0	0	0	0	33
1770–1779	94	67	8	1	3	5	1	179
1780–1789	144	12	7	12	13	6	8	202
1790–1799	43	2	0	6	11	4	3	69
Total	330	105	22	27	30	15	13	542

Source: Reichert, "El comercio directo" and the Sound Toll microfilms: 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, and 278.

The last of the arsenals (Cartagena) received only 22 transports of wood for shipbuilding (4.06%). This fact and the lack of data regarding the shipment of wood to La Habana (the only arsenal outside the Iberian Peninsula) can confirm the thesis that part of the wood that went to Cadiz was sent to these places. It is worth mentioning that wood for the needs of the shipbuilding industry also went to other ports (Malaga, Seville) or centers (shipyards in Cantabria and the Basque Country), however, they had a small share in the development of the royal navy.

19 Valdez Bubnov, Ivan. *Poder naval y modernización del Estado. Política de construcción naval española (siglos XVI–XVIII)*, (México: Universidad Nacional Autónoma de México, 2011), 269.

20 In the 18th century, in Spain were two types of cubit measures: 1. *codo común* (0.418 m) and 2. *codo real* or *de ribera* (0.574 m).

21 Luis Guitián Rivera, "La destrucción histórico del bosque en Galicia", *Semata. Ciencias Sociais e Humanidades*, 13 (2001): 133.

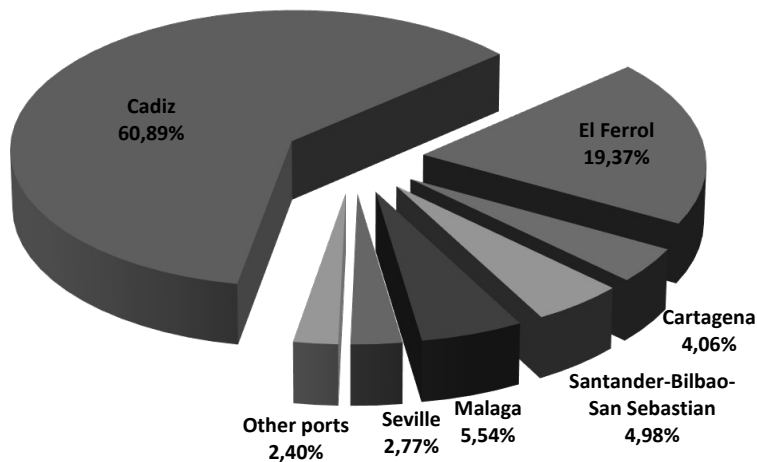


Diagram 4. Percentage distribution of main Spanish ports in the direct wood commerce from the South Baltic and registered in the Sound Toll (1700–1799)

Source: Reichert, "El comercio directo" and the Sound Toll microfilms: 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, and 278.

It should be noted that the basic document review in Spanish archives allowed to corroborate that reports and budgets prepared by the officers of the Spanish Navy represent a magnitude of the demand of wood for the correct operation of their departments, which had to deal with the constant failure of forestry supplies for construction, maintenance, repairing and careening of ships. It is interesting that in the official reports from each department corresponding to the decades 1780s and 1790s, the origin of the received or stored timber is mentioned. With frequency the great volume of it coming from the West Indies and North Europe²².

CONCLUSION

This preliminary study about the forest supplies systems for major naval departments of Spain (Cadiz, El Ferrol, Cartagena and La Habana) permit us to understand the importance of the natural resources in the rivalry for world domination in the 18th century. Also we seek to understand in detail the commercial strategies of Spain to hold its naval policy, which, in turn, will show the importance of the southern Baltic supplies in its belligerent system. At the same time, it will be possible to identify the advantages

22 One example of it is a report of the state of the Cadiz arsenal (1785) which made reference to the presence of „North pine”. In the same report is also the heading „West Indies Woods”. General Archive of Spanish Navy, Arsenales 7197, exp. 13.

and disadvantages of the raw material supply system in economic, administration, logistic, social, as well as ecological and environmental aspects.

Studying direct trade between the South Baltic and Spain, it can be seen that its development took place from 1740 and lasted until the end of the century. The period of increased maritime traffic occurred in the 1770s and 1780s, where 381 ships transported timber (70% of the total). It was a period of great development of the Spanish Navy headed by Pedro González Castejón and Antonio Valdés. At the time of this last Secretary (1783–1795), the production of ships of the line with 112 cannons (9 units) was intensified, where 5 were produced in La Habana and 4 in El Ferrol according to the design made by José Joaquín Romero y Fernández de Landa.

As one could observe in the South Baltic region, the expedition of timber for the needs of shipbuilding was concentrated around 4 main ports (Stettin, Gdansk, Königsberg and Memel), where Memel and Gdansk especially dominated (almost 75% of all vessels registered in Sound Toll came from these two ports). It is important to emphasize that the movement from the southern Baltic Sea was dominated by Prussian ports and the only one that did not come under the authority of this state was Gdansk (a free city), a vassal of the Polish king. Despite the domination of Prussian ports, it is worth knowing that a large part of the products that came to them came from the Polish-Lithuanian Union, which thanks to river routes went to the sea.

Analyzing the ports in Spain, where ship wood arrived, is the undisputed position of Cadiz, which took over 60% of all ships (330 vessels). This state of affairs can be explained both by the need to satisfy the arsenal in La Carraca as well as the fact that part of the timber was sent to other places on the Mediterranean Sea as well as to La Habana. The second very important shipbuilding center was El Ferrol, which received almost 20% of all wooden vessels (105 vessels). This state of affairs confirms the domination of these two centers in the development of the Spanish Royal Navy.

Finally, I want to explain that the next step of this investigation will look to resolve questions about the commercial networks at regional and global levels, in order to identify the merchants who bought forest materials from the *Hinterland* (the South Baltic region), as well as the invested money, the amounts of wood that corresponded to them per contract and information, which included the function of stores and business intermediaries with Spain. I also want to identify forest areas of wood cutting according to the agreements signed with the contractors. All this information will lead us to a better understanding of the Spanish global networks thanks to the identification of the merchants implicated in the naval supplies trade for Spain during the 18th century.

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English version: Mark Atkinson

SUMMARY

During the 18th century, the European political scene was dominated by the imperialist competition between Great Britain, France and Spain, which took a new course due to the greater development of Royal Navies. This rivalry for the dominion over the world influenced and stimulated the technological, economic and military progress, but, at the same time, this phenomenon provoked a high demand of natural resources (precious metals and raw materials, especially timbers, hemp and canvas) to maintain the operational needs of Royal Navies. The purpose of this paper is to show the importance of forest resources coming from the Southern Baltic (today the territories of Germany, Poland, Russia, and Lithuania) whose abundant forests were the principal source of wood, pitch, hemp and tar, that is, basic products used for building vessels and for keeping them in operation.

With this, through the toll registers of the Sund Strait (Denmark) and archive information from Poland and Spain, I am intending to analyze and interpret the evidence of wood supplies from the South Baltic (especially from actual Polish ports in Gdansk and Szczecin) which were sent to the Spanish naval departments during the 18th century in order to demonstrate the importance of those forest sources for the development of Spanish naval power.

ZAOPATRZENIE W DREWNO Z POŁUDNIOWEGO BAŁTYKU HISZPAŃSKICH DEPARTAMENTÓW MARYNARKI WOJENNEJ W DRUGIEJ POŁOWIE XVIII WIEKU

Słowa kluczowe: Hiszpański przemysł okrętowy, Południowy Bałtyk, zaopatrzenie w drewno, handel drewnem, XVIII wiek

STRESZCZENIE

W XVIII wieku europejska scena polityczna została zdominowana przez imperialistyczną rywalizację między Wielką Brytanią, Francją i Hiszpanią, która wpłynęła na szybki rozwój Królewskich Marynarek Wojennych tych krajów. Walka o panowanie nad światem stymulowała postęp technologiczny, gospodarczy i militarny, jednak z drugiej strony zjawisko to wywołało olbrzymie zapotrzebowanie na surowce naturalne, jak metale szlachetne i inne materiały potrzebne do prowadzenia wojny morskiej, zwłaszcza żelazo, drewno, smołę, żywicę, konopie i płótno lniane. Celem niniejszego artykułu jest pokazanie znaczenia zasobów leśnych pochodzących z *hinterlandu* południowego Bałtyku (dziś tereny Niemiec, Polski, Rosji i Litwy), których obfite lasy były głównym źródłem budulca w budownictwie okrętowym. Bazę dokumentalną tekstu stanowią rejestry sundzkie, gdzie została przeanalizowana żegluga pomiędzy południowym Bałtykiem i Hiszpanią oraz dane uzyskane podczas kwerend archiwalnych w Polsce i Hiszpanii, które miały za cel przedstawienie dowodów na istnienie bezpośredniego handlu drewnem nie tylko z Holandią, Wielką Brytanią, Francją i Skandynawią lecz również z innymi, odległymi regionami europejskimi jak miało to miejsce w przypadku drewna z południowego Bałtyku (zwłaszcza z obecnych polskich portów w Gdańsku i Szczecinie), które trafiło do hiszpańskich departamentów marynarki wojennej w XVIII wieku.