

French Atlantic ports for the maritime transport of food products in 18th century

by

Dr Hiroyasu KIMIZUKA, PhD South Brittany University

Taking advantage of the development of the long distance trade with the Antilles and the slave trade on the west coast of Africa, major seaports as Rouen, Nantes, Bordeaux and Marseille grew in the second half of the 18th century¹. Moreover, monopolizing shipping of vessels to the Indian Ocean, the installation of the French India Company was developing Lorient's shipyards and port infrastructure. However, small ports, linked closely to local markets, not yet cease maritime activities, as they do not ship vessels to navigate the long course with some exceptions². Although the great maritime trade and exotic products boost the economic growth of the French 17th and 18th centuries, food products from local markets continue to be the primary cargo for ships of interregional coastal trade before the arrival of the railway.

As for the generation of the 1970s, historians have produced theories that highlighted the economic growth of major French Atlantic ports in the 17th and 18th centuries, drawing on all counting quantitative sources, including inputs and output ports. After Christian Huetz Lemps, Paul Butel studied everything about port movements in Bordeaux from 1715 until the early 19th century³. Similarly, it is possible to identify studies of Marcel Delafosse about La Rochelle⁴, Jean Meyer about Nantes⁵, and Pierre Dardel about Rouen⁶. Although these historical works concerned with maritime businesses in middle distance, they didn't focus the relationship between each major French ports. Since the 1980s, historians have highlighted the small ports that revolve in the area of major ports. André Lespagnol presented the important role of the ports situated on the northern Brittany coast that contributed to the maritime commerce of Saint Malo in the 17th and 18th century⁷. Josette Pontet compiled commercial geography of Bayonne⁸. The doctoral thesis of Gérard Le Bouëdec showed the Lorient port networks through the example of supply of the East India Company⁹. Academic work led by Gérard Le Bouëdec at the University of South Brittany, André Lespagnol at the University of Upper Brittany, Jean Tanguy at the University of Western Brittany, illuminate the complexity of relationships between the ports on the coast of the province of Brittany and their actors (sailors, fishermen, vessel owners). The thesis of Bernard Michon described commercial activities of all the ports situated from the Gulf of Morbihan to the

¹ BUTEL P., *L'économie française au XVIII^e siècle*, Paris, SEDES, 1993, p. 149-152.

² Concerning the slave trades of Vannes, RAUT E. et LALLEMENT L., « Vannes autrefois, la traite des nègres », *Bulletin de la Société Polymathique du Morbihan*, Vannes, 1932, p. 53-74.

³ HUETZ DE LEMPS Ch., *Géographie du commerce de Bordeaux à la fin du règne de Louis XIV*, Paris, Mouton, 1975, 661 p. BUTEL P., *La croissance commerciale bordelaise dans la seconde moitié du XVIII^e siècle*, thèse d'État, Université Panthéon-Sorbonne, Paris, 1973, 2 vol.

⁴ DELAFOSSE M. et TROCMÉ E., *Le commerce rochelais de la fin du XV^e siècle au début du XVII^e*, Armand Colin, 1952, 231 p.

⁵ MEYER J., *L'armement nantais dans la deuxième moitié du XVIII^e siècle*, S.E.V.P.E.N, 1969, 469 p.

⁶ DARDEL P., *Navires et marchandises dans les ports de Rouen et du Havre au XVIII^e siècle*, S.E.V.P.E.N, 1963, 787 p.

⁷ LESPAGNOL A., *Messieurs de Saint-Malo, une élite négociante au temps de Louis XIV*, Rennes, PUR, 1996, 2 vols.

⁸ PONTET-FOURMIGUÉ J., *Bayonne. Un destin de ville moyenne à l'époque Moderne*, J & D Editions, Biarritz, 1990, 709 p.

⁹ LE BOUËDEC G., *Approvisionnement de la Compagnie des Indes (1737-1770)*, thèse de doctorat de 3^{ème} cycle, Paris IV, 1982, 633 p.

south of the Loire¹⁰. This port system allowed Nantes to become a major international ports of the French Atlantic coast. Thus, the French historiography enriches our knowledge of the scope of port activities of major seaports incorporating small service ports in the modern era.

However, these studies about maritime activities in French ports remain present economic growth and enlargement of the port networks of the big ports like Nantes, Lorient and Bordeaux. During meetings of the GIS Maritime History organized between 2008 and 2009, working about the complexity of the organization of ports that were used for cabotage, maritimistes historians have understood the importance of these ports. The confluences of the GIS in 2009 were, in fact, directed towards subjects concerning with the activities of small ports, their actors and the regional markets. The classification of types of the ports, such as major ports of command, secondary ports and small ports of service, allows us to better understand the complex organization of port activities and integrate the role of the small harbors in the French maritime economic networks. This hierarchy and specialization of port activities are likely to change in economic conditions.

As for the coastal trade between Bordeaux and Brittany, the success of these business relationships based on the complementarity that combined large and small harbors including suppliers of grains and sardines or fleets of service. Thus, the Atlantic port dynamic relied on the food traffic that mobilized all types of harbors.

The purpose of this article is to attempt to undermine the performance of the port networks that involved the movement of food products with observation ports on the Atlantic coast between Bordeaux and the tip of Brittany. We chose three commodities like our case study: wine, that of a product loaded in Bordeaux, cereals, that one of the main products shipped from Brittany ports to the southern French ports, and sardines, a product of the sea. This choice reflects the desire to show the type of activities of French Atlantic ports in the circuits of three major products.

I. Destinations of Bordeaux wine costal shipping to Brittany

Focusing on the flow of fleets of Bordeaux wine to the province of Brittany, we establish the definition and categorization of Brittany ports that receive the Bordeaux wine since the late 17th century to the eve of the French revolution, not forgetting to take into account the chronological evolution. The Brittany people had been the major consumers of Aquitaine wine since the Middle Ages. In fact, in the Middle Ages, the Brittany ports such as Vannes, Auray, Hennebont and Quimper were particularly important destinations of Nantes and Bordeaux wines. Bordeaux red wine was preferred by Brittany elites who were influenced by British culture. It seems that this trend of the taste in Brittany did not change in the next period. At the national level, the province of Brittany maintained its position as the principal market of Bordeaux throughout the modern era, although the Charente wine began to penetrate among the Brittany consumers¹¹. However, it should be noted the change in the economic environment over the early modern period. Bordeaux wine market in Brittany reorganizes in modern

¹⁰ MICHON B., *L'aire portuaire de Nantes aux XVII^e et XVIII^e siècles*, thèse de doctorat soutenue sous la direction de G. SAUPIN, Université de Nantes, 2005, 2 tomes.

¹¹ KIMIZUKA H., *Le commerce du vin d'Aquitaine en Bretagne au XVIII^e siècle*, thèse de doctorat en Histoire, rédigée sous la direction de G. Le Bouëdec, UBS, Lorient, 2013, p. 71-73.

times under the influence of two state institutions whose wholesalers command Bordeaux wine: the Royal Navy and the India Company. This change in economic conditions could reconfigure the port network about the traffic of the Bordeaux wine.

1. At the end of the 17th century

Map 1 Expeditions of Bordeaux wine to Brittany (1699)¹²



According to the research of Ch Huetz Lemps, the European market (excluding France) represented the first export destination Bordeaux wine, with 60.8% of total shipments unregistered in the Admiralty of Guyenne in 1699. Among the European countries, the preponderance of the United Provinces was explicit receiving 33,217 tons or 38.6% of Bordeaux's shipments. Northern countries (Sweden, Denmark and the Hanseatic cities) follow by importing 9,818 tons (11.4%). In contrast to the high demand of the European market, the ultramarine market (Newfoundland, West Indies and Africa) represented only 4.5% of exports of Bordeaux wine. The French national market, it represented 34.7% of total shipments in Bordeaux, and it was the Brittany which was the first destination. Indeed, according to P. Butel, "at the end of the seventeenth century, Britain absorbed nearly a quarter of Bordeaux wines

¹² HUETZ DE LEMPS Ch., *La géographie du commerce de Bordeaux, op. cit.*, p. 124-125.

loaded: In 1699/1700, 22 393 tons¹³." Thus, the province of Brittany received about 26% of the total shipments of wine from Bordeaux, which also represented 75% of the French market. Northern France followed, totaling 5,078 tons or 5.9% of total shipments of the Bordeaux wine. The geography of the Bordeaux wine trade was geared more to the north than south, Brittany contributes to this trend of commercial exchange.

By analyzing the Brittany ports that received more than 500 tons of fleets coming from Bordeaux, the map 1 shows three types of port at the end of the 17th century. First, international hub ports: Saint-Malo (2,418 tons) and Nantes (1,049 tons). These ports were connected not only to regional markets, but also to international markets such as Northern Europe, the Caribbean and Newfoundland. Second, there were the ports of the regional warehouse. They specialized in the trade of the regional framework. However, their importance in the circuits of the wine between Bordeaux and Brittany was never less than the international hub ports. If the port of Landerneau played a role of the center of the distribution of these substances in the west of the province (1,276 tons), the port of Redon also worked as the warehouse of Rennes, receiving 3,032 tons of Bordeaux wine. Performing the redistribution of Bordeaux wine to the small ports on the northern Brittany coast, Morlaix received 1,882 tons of Bordeaux shipments. We can still present the same type of ports, but which had a relatively smaller hinterland: Saint-Brieuc (836 tons), Quimper (906 tons), Quimper (561 tons), Vannes (936 tons). Hennebont received 557 tons of the fleets of Bordeaux wine. This port appeared as the major port of the bishoprick of Vannes until at least 1715. Thirdly, the military port as Brest takes first place as an importer of Bordeaux wine. We should revoke the presence of the Royal Navy at Brest who was applying Bordeaux wine for refueling to squadrons crews and workers of the arsenal. Port-Louis received 848 tons of wine for the purveyors of the Navy like Brest.

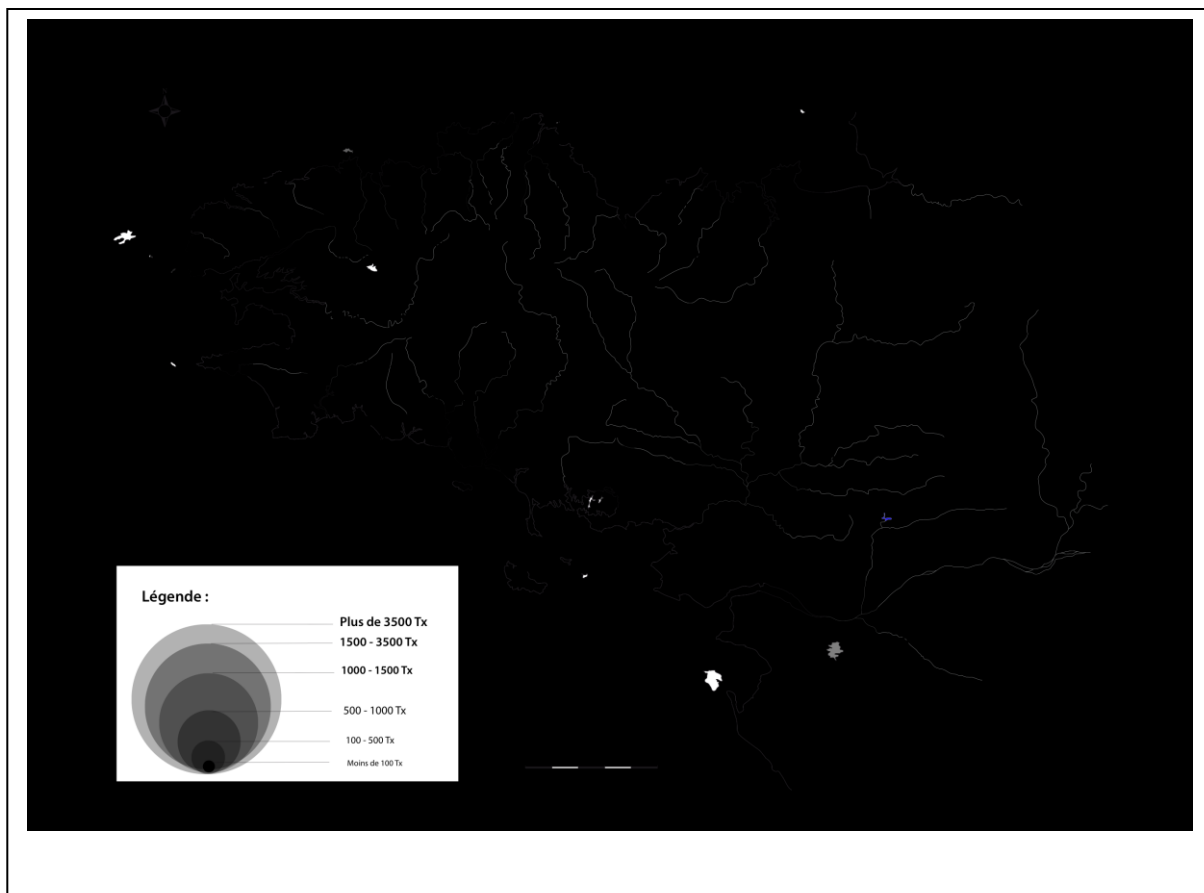
The middle of the 18th century

War was a peculiar opportunity in order to sell Bordeaux wine for the purveyors of this commodity, making shipments grow in Bordeaux and Libourne. We decided to make a map of the destination ports armed to Brittany in 1745 buildings.

According to the custom records in Bordeaux, the European market received 44, 400 tons of wine from Bordeaux, ultramarine market received 10,300 tons. As regards the French market, according to the record of the Admiralty of Guyenne, the equivalent of 20,272 tons of fleets left the port of Bordeaux in loading only the wine. In 1745, 77% of fleets destined to the Brittany ports were loaded with wine. However, this figure includes only fleets that had only loaded the wine in Bordeaux. In fact, a number of coasters carried commodities with other types of goods. Thus, *l'Aimable Marie d'Aber Ildut*, 55 tons, transported the wine, a gun and the soap to Redon in 1745¹⁴. Similarly, 4 ships (or 207 tons) left the port of Bordeaux loading wine and hemp to Brest (2), Lorient (1) and Port Louis (1). In 1745, the equivalent of 1,825 tons of fleets boarded the wine and the cereals to Brest (2), La Rochelle (14), Lorient (7), Nantes (10), Rochefort (7). *La Sainte Anne d'Aber Ildut*, 60 tons, left Lorient with a cargo of wine, flour and general merchandise.

¹³ BUTEL P., *La croissance commerciale bordelaise*, op.cit., p 384.

¹⁴ KIMIZUKA H., op. cit., p. 294-296.



Map 2 Expéditions of Bordeaux wine to Brittany (1745)¹⁵

Map 2 illustrated the destinations of all fleets leaving Bordeaux to Brittany loading only the wine or the wine and other goods. In 1745, traffic increased in five ports. Brest ranks first in the Brittany ports, receiving the equivalent of 5,442 tons of fleets from Bordeaux. Thus, when considering the Bordeaux wine market in Brittany, it is essential to take into account the weight of the supply for the Royal Navy and stores purveyors for the soldiers.

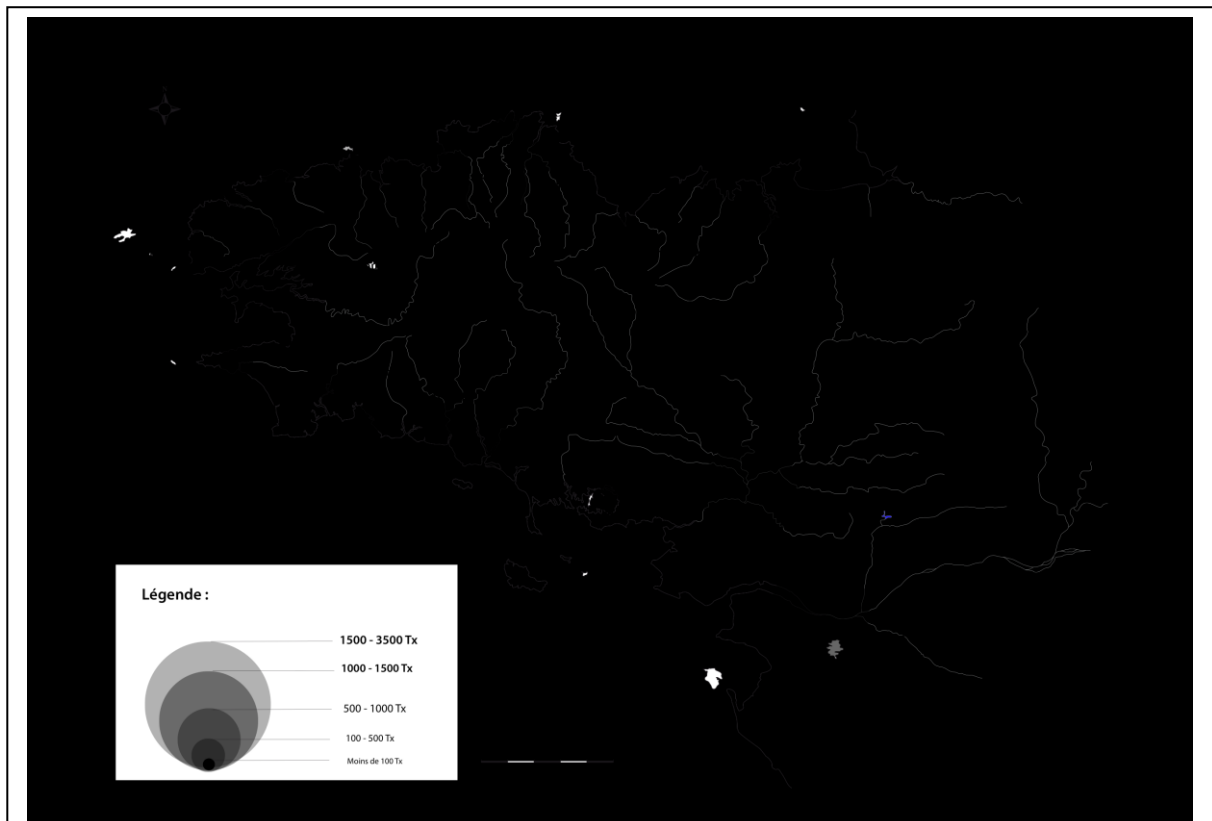
In conditions of the international hub ports, the appearance of Lorient as the port of the India Company, characterizes the geography of the port networks of Bordeaux with the international hub ports in Brittany after the mid-eighteenth century. Behind Brest, Lorient took the second place as the biggest importer of Bordeaux wine in Brittany by receiving 3,412 tons of vessels loading the wine in Bordeaux. It is likely that some of this wine was re-exported to the West Indies after the establishment of the convoy system by which the vessels of the Royal Navy to protect commercial vessels. Under the influence of the English threat, the number of fleets coming to Saint-Malo decreased with a tonnage of 2,209 tons. Finally, the port of Nantes received 2,209 tons of fleets.

Unlike major seaports, the number of buildings entered the ports of regional warehouse regional declined, relative to the beginning of the century, with the exception of the ports of Morlaix and Quimper.

¹⁵ Arch. dép. de la Gironde, 6B 309.

The port of Morlaix received 2,603 tons. We can hypothesize that the illegal trade had its share in the development of the trade with Morlaix. Similarly, the port of Quimper received 975 tons of fleets. However, other ports of regional warehouse reduced their importance. Vannes received only 620 tons of vessels loading the wine from Bordeaux. We find also lower shipments to Redon Bordeaux (1,608 tons). Similarly, Landerneau no longer received 921 tons of fleets, even if this port still retained its place as the center of distribution in the bishopric of Saint-Pol-de-Leon. About Hennebont, this port was only a secondary port in the bishopric of Vannes, receiving 225 tons of fleets charging the wine in Bordeaux. In the end of 18th century

Map 3 Expeditions of Bordeaux wine to Brittany (1787)¹⁶



In 1787, the French national market received 739 fleets (30,917 tons) in charge of Bordeaux, including 454 fleets, with a tonnage of 16,583 tons, were intended to Brittany ports. Representing 54% of a total of the fleets of wine from Bordeaux to French ports, the province of Brittany remained an important and traditional market for the Bordeaux wine throughout the 18th century. Nevertheless, the share occupied by Brittany market in the French market started to decline at the end of this period. This tendency may be related to the fall of the colonial trade by Brittany ports, because some of the imported wine was no longer re-exported to ultramarine market. This decline can also be explained by the competition of wines from other vineyards like those of Libourne, La Rochelle and Ile de Ré on the eve of the Revolution.

¹⁶ AN G⁵ 50.

In that same year, the first destination of fleets from Bordeaux to Brittany remained the port of Brest with 103 vessels (5,104 tons). This number was a slight decline over the period of the Austrian Succession War, but it seems that the presence of officers of the Royal Navy supported the purchasing power of Brest.

The second pole of destination remained consisting of international hub ports such as Saint-Malo, Nantes and Lorient. Saint-Malo was the most important destination of Bordeaux wine among the ports of the northern coast of Brittany peninsula, receiving 75 fleets, or 3,981 tons. Then Lorient retained its place, receiving 76 fleets, or 3,468 tons. This volume appeared to be intended to supply the Bordeaux wine to the third India Company. The direct participation of shipowners of Bordeaux to the shipment to the Mascarene led to a decrease in the volume of stored Lorient for the third India Company wines.

Unlike the international hub ports, the weakening of the commercial relationship with Bordeaux is particularly visible for the ports of regional warehouse in Brittany, whose only three ports, such as Morlaix, Landerneau and Redon, received more than 500 tons of fleets from Bordeaux in 1787. As for the bishopric of Vannes, Auray and Port-Louis disappeared as destination ports and the flow of fleets for Vannes reached only 17 ships (513 tons). This change of environment of maritime trade was bound to the capture of all traffic by Lorient. Thus, it should be noted a change of the trade geography of Bordeaux with the Brittany ports in the late 18th century. Circuits of the Bordeaux wine were concentrated in port networks between Bordeaux and the international hub ports or military port that were capable of having a significant purchasing power.

II. The cereal and sardine ports

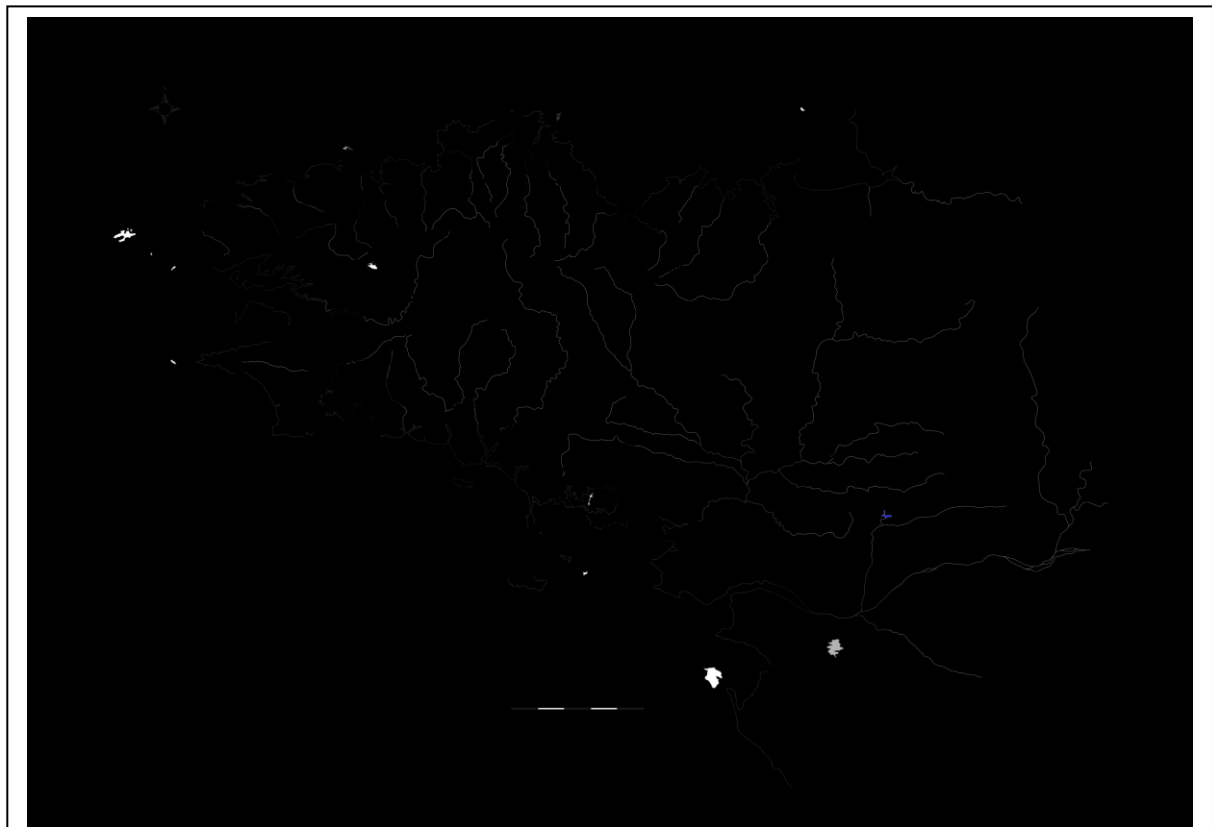
It should account for the ports of loading cargo back to Bordeaux to complete the study of marine systems. According to the counting input port of Bordeaux records, we can identify the departure ports of the 2,302 fleets registered by the Admiralty of Guyenne in 1754, of which 1,495 fleets (56,007 tons) were from French ports¹⁷. Representing 35% of the total tonnage of Bordeaux port movements, national cabotage takes second place behind the intra-European cabotage (41.5%) or 66,293 tons. When targeting the French national cabotage, the province of Brittany represented 56% of the fleets from French ports registered in Bordeaux, which was 42.7% of the total tonnage (23,921 tons). Thus, Brittany was the most important customer of Bordeaux among the French Atlantic ports.

Map 4 shows three characters of the departure ports of fleets leaving Brittany to Bordeaux in 1754. Firstly, the international hub ports such as Nantes and Saint-Malo and the military port made their important places. However, it should be noted that the goods from the ultramarine market did not attract the merchants of Bordeaux. Sure, the shipmasters of cabotage of Port-Louis brought the exotic products such as cotton fabrics from the sale of the India Company. Nevertheless, we must not forget the fact that 153 fleets on 213 charged sardines leaving the port of Port-Louis to Bordeaux. In terms of fleets from Nantes, there was only one vessel that carried coffee as exotic products. Similarly, there

¹⁷ Arch. Dép. de Gironde, 6B 261-272.

were only two fleets that left Saint-Malo to Bordeaux with the cod. Bordeaux could be supplied the cod by the fishing vessels from Newfoundland armed by the Bordeaux shipowners. Thus, when observing the circuits between the international hub ports in Brittany and Bordeaux, these ports functioned as those who specialized in shipments regional products. Second, the ports of regional warehouse of Brittany like Morlaix, Landerneau, Quimper, Vannes and Redon were present. They specialized in shipments of grains such as oats, rye and wheat. As the agriculture of the Bordeaux area specialized in viticulture activities, the city of Bordeaux needed the cereals, not only from its hinterland, but also from more distant regions such as Brittany, Normandy and foreign countries. Finally, it should be noted the presence of small fishing sardine ports such as Camaret, Douarnenez, Audierne, Concarneau and Belle Isle. These ports of the seafood such as sardines and oysters were concentrated on the southern coast and western coast of the province of Brittany.

Map 4 The origins of ships entering in Bordeaux (1754)



1. The grain ports

The analysis of the grain ports shows three types of port networks. At first, the direct networking with regional ports ensured the supplies of grains of the major international hub ports such as Bordeaux, Nantes and Lorient. For the grain trade between Bordeaux and Brittany in 1722, Brittany grain ports were concentrated on the southern coast, representing 75% of the supply of grains to Bordeaux market¹⁸. Fifteen ports appear as ports of shipments of grain, Vannes: 6,365 *boisseaux* Redon: 4,503 *boisseaux* Nantes: 24,229 *boisseaux*, Pont l'Abbé: 4,370 *boisseaux* Quimper: 4,446 *boisseaux* and

¹⁸ BUTEL P., *La croissance commerciale bordelaise, op. cit.*, p. 380.

Auray: 3,515 *boisseaux*. Playing a role of the regional warehouse of grains from upstream of the Loire, Nantes began to concentrate the shipments of this commodity to Bordeaux. However, other secondary ports on the south coast of Brittany did not lose their own relations with the Bordeaux market.

According to the input port register Bordeaux in 1754, we can draw the geography of Brittany ports that provided grains in the mid 18th century. As regards the shipment of oats, wheats, and rye grains, it is possible to find the following ports:

- Oats: Pont l'Abbé (1) Quimper (1)
- Wheat: Redon (1) and Pont l'Abbé (1)
- Grains: La Roche Bernard (2)
- Rye: Redon (10), Quimper (3), Auray (2) Hennebont (1) La Roche Bernard (1)

Thus, Redon was the most important port for shipping of grains to Bordeaux in 1754. Quimper and Auray followed. They exported grains produced in their hinterlands. By the way, we can not find any ship from Nantes loading grain into the input port records of Bordeaux of this year. The source is no longer possible to explain why the Bordelais do not matter no grain of Nantes in 1754.

The port of Nantes received the supply of grains from the ports situated between Bourgneuf and Quimper. There were two supply centers of grains for Nantes. One was the hinterland of Nantes in the upstream of the Loire, the other was the ports of southern Brittany such as Hennebont, Auray and Vannes. The barges of Paimboeuf and Saint-Nazaire frequently conducted trips to Nantes for transporting grain. The Nantes traders were filing this product in Paimboeuf and Saint-Nazaire to make load onto ships for the West Indies, since the depth of the port of Nantes was not sufficient for the water that was pulling them. These two ports were the grain warehouses of Nantes. According to the records of "*acquits à caution*"¹⁹, Nantes received 12,071 quintals of grain shipped from Paimboeuf and 6,982 quintals from Saint-Nazaire in 1774. Apparently the commercial growth of Nantes in the second half of the 18th century strengthened the relationship between this port and the ports of the bishopric of Vannes. The port of Auray sent 2,350 quintals of wheat and rye to Nantes in 1774.

Tableau 1 Expeditions of cereal to Bordeaux (1774)²⁰

Ports of load	Volume of cereal charged (Quintal)	Part of the total of cereal sent (%)
Bourgneuf	2 777,25	1,1%
Brest	613,25	0,2%
La Roche Bernard	7 667,18	3,0%
Lézardrieux	346,04	0,1%
Lorient	2754	1,1%
Morlaix	880,89	0,4%

¹⁹ Arch. dép. d'Ille-et-Vilaine, C 1681 – C 1682.

²⁰ *Ibid.*

Nantes	144 845,89	57,6%
Paimpol	5 861,52	2,3%
Perros-Guirec	344	0,1%
Pont l'Abbé	2 136	0,8%
Pontrieux	446,56	0,2%
Pontusval	1 167	0,5%
Port à la Duc	960	0,4%
Quimper	41 291,91	16,4%
Saint-Brieuc	1623,4	0,6%
Saint Malo	12 109,88	4,8%
Tréguier	5 627,26	2,2%
Vannes	16 364,36	6,5%
Le Legué	3 770,6	1,5%
Total	251 586,99	100,0%

As for the grain trade between Bordeaux and Brittany, we can see that there were some changes among the Brittany grain ports for the Bordeaux market in the second half of the 18th century. Ports that were located between the Loire and the point of Brittany totalized approximately 86.6% of shipments of various types of grains to Bordeaux in 1774. Three major poles emerged in the southern Brittany: Nantes, Quimper and Vannes. By sending 57.6% of grains of Brittany, the preponderance of the port of Nantes is obvious. The entire ports system Nantes-Paimboeuf-Saint-Nazaire played a role of a major supplier of grain to Bordeaux in the 18th century²¹. Sure, sending 41,291 quintals of grain, Quimper occupied the second position in the list of ports who exported this commodity to Bordeaux in 1774. Nevertheless, the relationship with other ports of regional warehouse was available. Thus, we can find the importance of the second type of port networks, that is to say that networks between the international hub ports in the second half of the 18th century ports. Enjoying their vast open networks as well as inter-regional markets and international markets, the international hub ports were able to store and forward cereals depending on market conditions.

Thirdly, networks between regional ports contributed to shipments of the regional products to the major consumer markets. These port networks were influenced by the geographical conditions of each port. For example, the port of Auray, which benefited from its location at the entrance of the Gulf of Morbihan, worked as a front-port of Vannes and Hennebont, "two ports like maritime neighbors, but less convenient for communication from the interior to the ocean²²." The Vannes' traders did not hesitate to have commissioners in the port of Auray to facilitate trade. Indeed, some of the stored grain in Vannes was certainly shipped from the port of Auray. Taking advantage of the presence of his correspondents in Auray, Ignace Advice Desruisseaux, one of the biggest grain traders of Vannes, collecting almost all

²¹ By studying the source inregistered in Bordeaux, Paul Butel came to the same conclusion. BUTEL P., *La croissance du commerce de Bordeaux, op. cit., Annexe*, p. 94-95.

²² OGÉE J., *Dictionnaire historique et géographique*, Nantes, Vatar, 1778, p. 59.

grain products in the bishopric of Vannes by the traders of Auray so they loaded them on board of vessels who intended to Nantes and to Bordeaux²³.

Port networks of the diocese of Quimper show the same example. Ports of Pont-l'Abbé and Pont-Aven shared their role of grain warehouses with the port of Quimper. Certainly, Quimper's hinterland was one of the subdelegations of Brittany where wheat production exceeded the market demand for local consumption as the case of the bishopric of Vannes²⁴. However, it is essential to remember that Quimper was a grain port platform of the provider networks of this commodity in Brittany. Indeed, Quimper received 3,177 tons of grain fleets from Pont-l'Abbé, 1,336 tons from Audierne, 1,256 tons from Nantes and 1,254 tons from Pont-Aven between 1716 and 1781²⁵. Thus, the shipment of grain shows the complex organization between the ports on the coast of Brittany.

2. The sardine ports

Unlike the grain trade, shipments of the sardines were completely done by the ports of any regional fisheries throughout the 18th century.

The sardine represented another important commodity exported from Brittany to Bordeaux. At the end of the 17th century, the largest exporter of this commodity was Douarnenez (432 tons, 1,719 barrels and 1,048 *milliers*), followed far behind, by Belle-Ile (40 tons, 576 barrels and 1,383 *milliers*), Quiberon (33 tons, 149 barrels, 70 *milliers*), Audierne (23 tons, 29 barrels and 188 *milliers*), Crozon (61 tons, 170 barrels and 123 *milliers*), Port Louis (41 barrels, 360 *milliers*) and Brest (162 barrels, 144 *milliers*) which were the main sardine ports of Brittany²⁶.

According to the input port records of Bordeaux in 1754²⁷, four ports (Port Louis, Belle-Île, Douarnenez and Concarneau) were the main port of shipments of the sardine to Bordeaux. Their small ships were intended for the carriage of such goods; strengthening, as shown Dominique Robin in his thesis, the sardine trade between Bordeaux and the Brittany coast²⁸. Port-Louis took the first place of shipping of sardines to the Bordeaux market with 801 tons. Concarneau shipped 701 gross tonnage sardine pressed to Bordeaux. The port of Douarnenez also participated in the sardine trade with Bordeaux. This port sent 292 tons of fleet with the sardine to Bordeaux. While Douarnenez and Concarneau represented only limited wine consumption markets, they were essential to provide cargo to coasters that went down to Bordeaux.

²³ BARTHELEMY M., *Ignace Advise-Desruisseaux : itinéraire d'un négociant vannetais au XVIII^e siècle*, Maîtrise en Histoire, rédigé sous la direction de G. Le Bouëdec, Université de Bretagne-Sud (Lorient), 2002, 2 vol, 406 p.

²⁴ LETACONNOUX J., *Les subsistances et le commerce des grains en Bretagne au XVIII^e siècle, essai de monographie économique*, Rennes, Imprimerie Oberthur, 1909, p. 33.

²⁵ POIGNANT A., *Les activités du port de Quimper de 1716 à 1781*, Maîtrise en Histoire, Université de Bretagne Occidentale, 1973, p. 41.

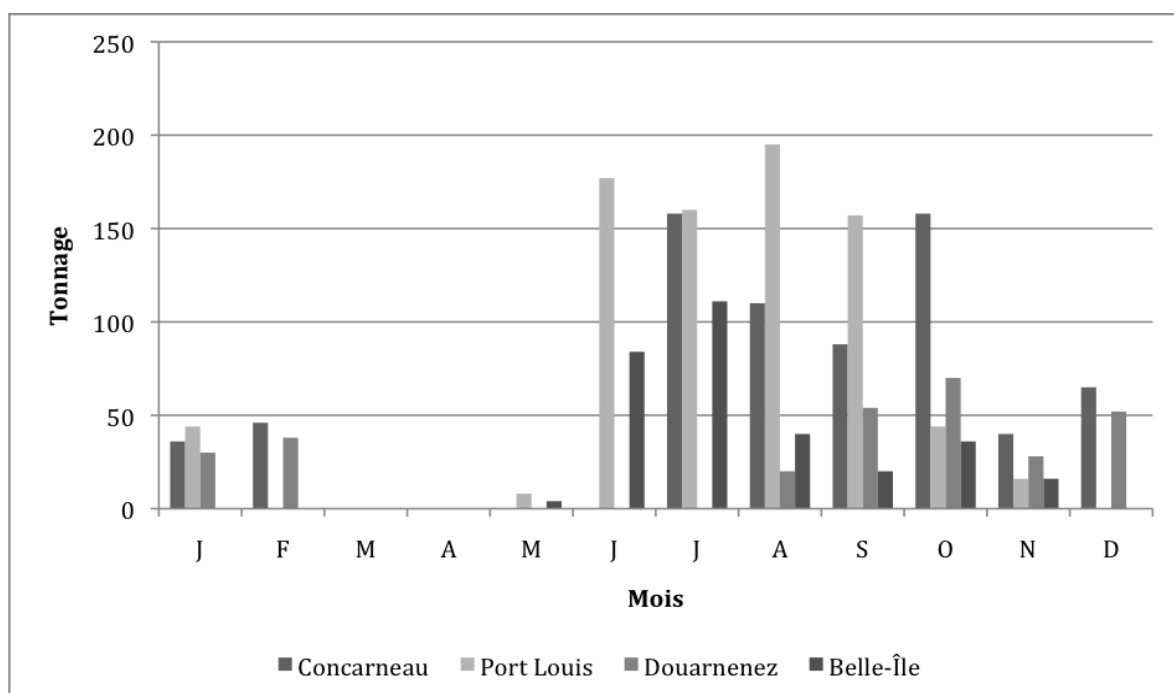
²⁶ HUETZ DE LEMPS Ch., *Géographie du commerce de Bordeaux, op.cit.*, p. 396-397.

²⁷ Arch. Dép. de Gironde, 6B 261-272.

²⁸ ROBIN D., *Pêcheurs bretons sous l'Ancien Régime. L'exploitation de la sardine sur la côte atlantique*, Rennes, PUR, 2000, p. 57-58.

Sardines, after arriving at the port of Bordeaux, were redistributed to the real consumption markets, that is to say, the Languedoc and the Mediterranean coast²⁹. As a result, traders originated in these regions, immigrating to Port Louis, passed a taste of their customers of the sardine³⁰. Preferred by consumers in southern France, pressed sardine of Concarneau also attracted the capital of Bordeaux. Unlike Bordeaux, it seems that Nantes preferred sardines from ports of the bishopric of Vannes as Carnac, Belle-Île, Houat and Hoëdic³¹. Although the sardine fleet ports were intended mainly to the large French ports such as Nantes and Bordeaux, they were related to intra-European market by the trade of *rogue*, bait for the sardine fishing. According to the lists provided by the Danish consul in Nantes, Danish ships brought 11,396 barrels *rogue* to the Brittany ports in 1783 and 10,435 barrels in 1785³². Moreover, according to the description of Jacques Cambry, traveler at the end of the 18th century, Norway was the main supplier of the goods for fishermen of Douarnenez³³. Thus, through trade sardines, Douarnenez was linked to the network of major ports such as Nantes, La Rochelle, Bordeaux and Bayonne, as well as international port networks. Finally, it should be noted the seasonality of port activities of the sardine ports. The season when the goods arrived at Bordeaux varied from each sardine port. Small ships of Belle Isle and Port Louis arrived at Bordeaux between June and September with fresh sardine or salted sardine. 21 fleets of Belle-Ile and 31 of Port Louis arrived at Bordeaux in June 1754. Generally, the size of a ship did not exceed 4 tons. The number of ships from these two ports began to decrease from October.

Graphique 1 Evolution of ships entering in Bordeaux with the sardine (1754)³⁴



²⁹ CABANTOUS A., LESPAGNOL A., PÉRON Fr. (dir.), *Les français, la terre et la mer (XIII^e-XX^e)*, Paris, Fayard, 2005, p. 143.

³⁰ ROBIN D., *op. cit.*, p. 192-193.

³¹ MICHON B., *Le port de Nantes au XVIII^e siècle. Construction d'une aire portuaire*, Rennes, PUR, 2011, p. 228.

³² POURCHASSE P., *Le commerce du Nord. Les échanges commerciaux entre la France et l'Europe septentrionale au XVIII^e siècle*, Rennes, PUR, 2006, p. 86.

³³ ROBIN D., *op. cit.*, p. 321.

³⁴ Arch. dép. de Gironde 6B 261-272.

Instead, fleets of Concarneau and Douarnenez started arriving from July, and the peak was reached in October. Both ports continued to ship the sardine until December. Ship's size increased slightly. In fact, their average size was 14 tons for Concarneau and 29 tons for Douarnenez. Moreover, if the goods returned by ships from Port Louis and Belle-Île was mainly fresh sardine in June, July and August, it was salted sardine which consisted shipments of Douarnenez and Concarneau in October and December. These coasters of sardine fleets brought the wine from Bordeaux to their ports of departure. For example, there were 4 ships of Douarnenez and 2 ships of Concarneau that loaded other wine in Bordeaux for their return cargoes in 1787³⁵. Michel Cauvic, shipmaster of *la Marie Françoise*, made three trips between Concarneau and Bordeaux during a year. The ports of service of the maritime circuits between Bordeaux and Brittany

In the late medieval era, small Brittany ports such as Penmarch, Audierne, Quimper, Crozon, Pontrieux, Saint-Pol-de-Léon, Aber-Ildut, Conquet, Port Blavet, Ouessant, Pouldavid and Binic ensured the interregional and international maritime transport of the Aquitaine wine³⁶. Taking advantage of its geographical position, the Ile d'Yeu³⁷ was an important point for the navigation on the French Atlantic coast. Due to the large number of its ships, this island could be considered as one of the first shipment ports of the cabotage of Ponant at the end of the reign of Louis XIV. This fact highlighted the particular positioning of the small harbor in the maritime trade from Bordeaux. Indeed, it was neither a consumer market for Bordeaux wine, nor a port where the vessels loaded the cargo for going to ports of Aquitaine. It provides only the means of maritime transport, but it is essential for the Bordeaux for its port activities. By studying the typology of small ports of the French Atlantic coast, Gérard Le Bouëdec has noted that "some small ports are often specialized in the armaments of fleet coasters³⁸" and this comment should qualify for the Ile d'Yeu.

3. The estimation of the specialized ports of service

According to the records of the Admiralty of Guyenne in 1787³⁹, 321 shipments were made by the fleets attached to Bordeaux, but only 87 were oriented to French ports, which represented only 7% of total of ships leaving Bordeaux for the national cabotage in 1787 (1 128 leaves). This data shows the strong participation of Bordeaux to the trade of long distance. Therefore, Bordeaux needed service fleets of other ports for cabotage of the French national scale.

To define the status of "service port", using the results of evaluation of the records of Bordeaux in 1787, we carry out the calculation by the following formula:

³⁵ AN G⁵ 50.

³⁶ LE BOUËDEC G., *Les Bretons sur les mers*, Rennes, Éd. Ouest-France, 1999, p. 18-20. CASSARD J.-Ch., « Les marins bretons à Bordeaux au début du XIV^e siècle », *Annales de Bretagne et des pays de l'Ouest*, Tome 86, N°3, 1979, p. 379.

³⁷ HENRY J.-Fr., *Des marins au siècle du Roi-Soleil : l'île d'Yeu sous le règne de Louis XIV*, Janzé, Y. Salmon, 1982, p. 15-16. L'auteur fournit ces informations d'après SHA, manuscrit, 21.1085, *Description de l'île d'Yeu par Monsieur de Lyon*, 1695, aussi que AN Marine G 140, *Mémoire pour l'établissement d'un phare*, 1788.

³⁸ LE BOUËDEC G., « Les petits ports de la façade atlantique (Du XVI^e au XIX^e siècle) », dans *Historia, Revista da faculdade de Letras*, III^e Série, vol 9, Porto, 2008, p. 19-20.

³⁹ AN G⁵ 50.

Rate of direct return (%) = (Number of vessels of port A leaving Bordeaux for port A) / (Total vessels of port A outgoing Bordeaux) X 100

If the rate of direct return of vessels of a port is less than 10%, we can consider this port as a service port that provides the means of maritime traffic between Bordeaux and ports other than the port of origin. Certain ports as Camaret and Douarnenez, which functioned as service port and port of loading of the cargo, were not considered here because we consider only those who specialize in the transportation of goods to other ports.

Tableau 2 The ports of service of Bordeaux (1787)

Ports of origin	Total of vessels leaving Bordeaux		Traffic with the ports of origin	
	Number of vessels	Tonnage of vessels	Number of vessels	Total part of the number of vessels (%)
Aber Benoît	2	56	0	0,0%
Aber-Ildut	26	1014	1	3,8%
Aber Wrach	4	192	0	0,0%
Envaux	4	180	0	0,0%
Argenton	23	1055	0	0,0%
Arzon	11	258	0	0,0%
Baden	2	36	0	0,0%
Belle Île	3	94	0	0,0%
Blaye	16	635	1	6,3%
Bréhat	3	67	0	0,0%
Camaret	3	118	0	0,0%
Carnac	12	324	0	0,0%
Carteret	4	286	0	0,0%
Caverne	2	89	0	0,0%
Fécamp	2	206	0	0,0%
Honfleur	7	833	0	0,0%
Île-aux-Moines	22	984	0	0,0%
Île d'Arz	18	788	0	0,0%
La Flotte	3	275	0	0,0%
La Roche-Bernard	2	72	0	0,0%
Le Conquet	37	1581	1	2,7%
Le Croisic	2	90	0	0,0%
Le Faou	9	503	0	0,0%
Libourne	2	60	0	0,0%
Locmariaquer	3	67	0	0,0%
Mesquer	1	54	0	0,0%

Mortagne	2	140	0	0,0%
Ouessant	2	60	0	0,0%
Penerf	2	139	0	0,0%
Plassac	41	2175	0	0,0%
Plouharnel	13	373	0	0,0%
Pont l'Abbé	1	30	0	0,0%
Pontrieux	3	381	0	0,0%
Port-Louis	1	50	0	0,0%
Port-Navalo	1	15	0	0,0%
Podensac	8	228	0	0,0%
Quillebeuf	3	512	0	0,0%
Rhuys	10	531	0	0,0%
Rochefort	3	308	0	0,0%
Rocque de Tau	26	1427	0	0,0%
Saint-André-de-Cubzac	2	98	0	0,0%
Saint-Briac	3	200	0	0,0%
Saint-Estephe	6	160	0	0,0%
Saint-Savinien	17	637	0	0,0%
Sarzeau	2	85	0	0,0%
Perros	2	65	0	0,0%

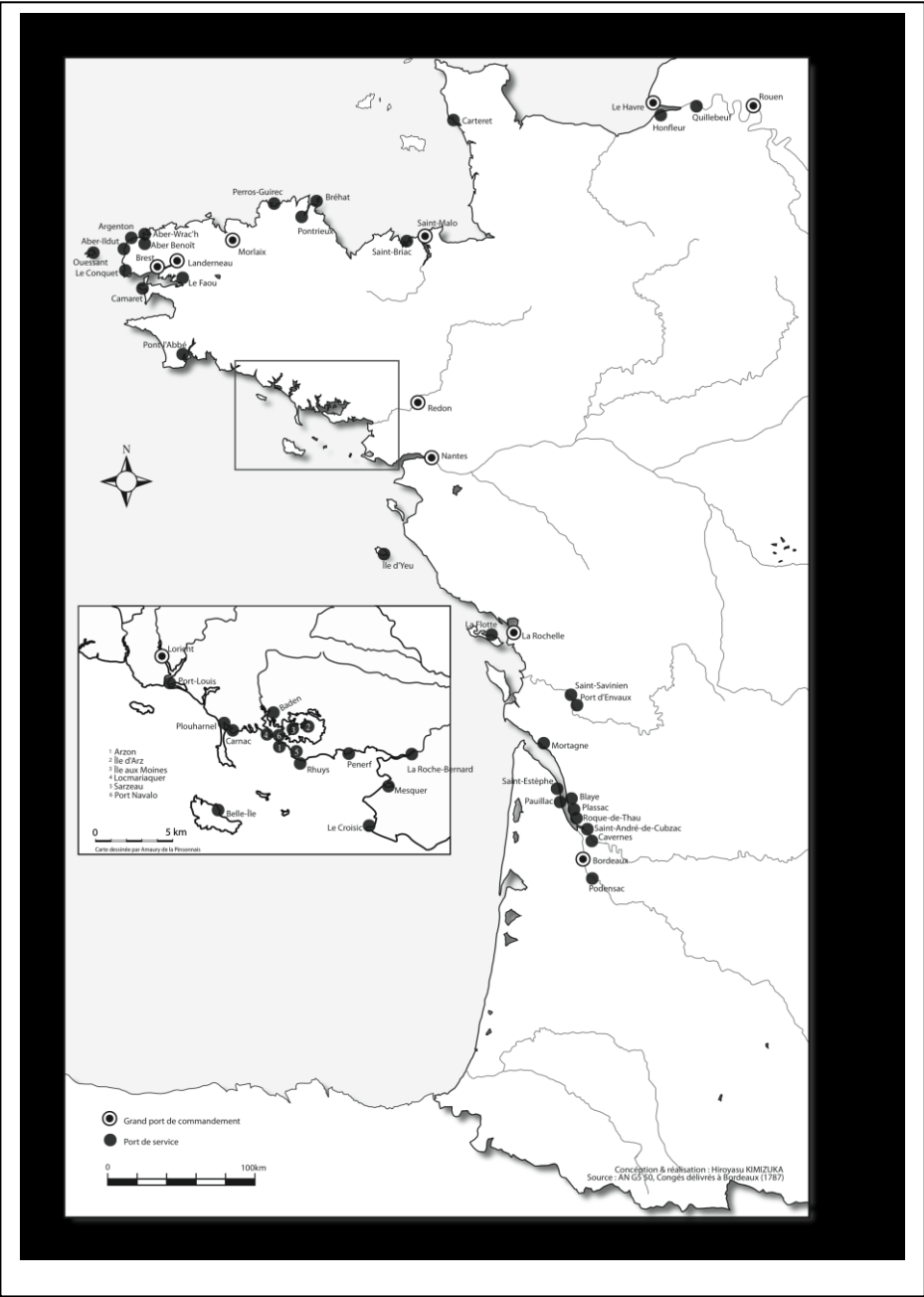
According to our calculation of the rate of vessels that did a direct return to their ports of origin after leaving Bordeaux, two lessons are learned. First, the vessels of the international hub ports such as Nantes and Lorient provided only a small part of the circuit between Bordeaux and ports of departure. It seems that the port of Lorient provided its coasters not only for its food supply, but also for other ports such as Brest in 1787. Secondly, the trade between Bordeaux and Landerneau was made by the coasters of Landerneau. This port was not dependent on its neighbor port for maritime activities. Similarly, the port of Concarneau used only vessels to transport wine from Bordeaux in 1787. Thus, the secondary ports, which were able to provide local products, tended to carry their traffic with their own vessels. Exceptionally, in the regional secondary ports, the port of Redon needed to receive the service on carriers of the other small ports.

We can find two exceptional ports in this list: Libourne, Rochefort and Port Louis. First, Libourne was somehow "in capital" in the province of Guyenne. Moreover, this port rarely invested in armaments to the West Indies, even if the port acquired the privilege of colonial trade. The wine of the generality of Libourne attracted Dutch clients, but these were foreign vessels who sought these wines in this port of the Dordogne. And these wines were also sent to Brittany and Normandy by small coasters from the French ports⁴⁰. Libourne, charging port without fleet, we must remain cautious because our sources do not contain the vessels unregistered in Libourne. Coasters of Rochefort, meanwhile never provide traffic between Bordeaux and home port in 1787. We can count 49 vessels of Rochefort leaving Bordeaux for

⁴⁰ The port sends Libourne 3,553 tons to Brest, and 1,261 tons in 1787 to Landerneau. MANET-DELAIRE N., *Vins et négociants d'Aquitaine vers la Bretagne finistérienne de 1660 à 1795*, Nantes, Coiffard, 2007, p. 59.

the Royal Navy. They were operated by the fleets of other ports Charente as the island of Oleron, Saint Savinien, and Marennes Taillebourg or the south coast of Brittany such as Ile aux Moines, La Roche Bernard and Rhuy. Thus, the port of Rochefort is not a service port, but a donor port order or command. It is possible to find relationships between the service ports and small ports that exported seafood. For example, Camaret was, firstly, a port of fishermen of sardine, and on the other hand, a port of coasters of the transport of food and other commodities to supply the port of Brest. Coasters of Locmariaquer, dealing with the trade of oysters between their port of origin and Bordeaux, participated in the transport of goods loaded in Bordeaux to ports between the Bay of Biscay and the tip of Brittany. Thus, the ambiguity of the distinction between the service ports and fishing harbors is evident. The major areas of service ports

Map 5 Ports of service for the Bordeaux's exportation (1787)



The map 5 shows several service ports of the coastal trade from Bordeaux. The first pole of service ports located around the estuary of the Gironde. Indeed, while the port of Bordeaux centralized goods from its vast hinterland and its foreland. And this port must rely on outside ports of the estuary of the Gironde to succeed its multiple tasks. The port of Blaye fulfilled 5 functions: point of the maritime defense of Bordeaux⁴¹, oblique port of the Admiralty of Guyenne, service port of Bordeaux, fishing harbor and port of loading local products. When François de Paule Latapie, Inspector of factories, reported in 1778 that "[2313 ships] of all nations, even French unless they come from America, for the cabotage [...] entered the harbor from Blaye 1 October 1777 until 1 June 1778⁴²"; we can only note that this port was a true avant-port of Bordeaux. With regard to the service ports for shipments of Bordeaux, three ports emerge. Ports of Blaye (335 tons) and Rocque de Thau (687 tons) specialized mainly in the interregional coastal trade. It should also be noted the importance of Plassac, a small port near Blaye, with 26 vessels (1,302 tons). It seems to us that the relationship between Bordeaux and these small ports on the banks of the Gironde did not change at the beginning of the next century⁴³.

The map of the service ports in Brittany draws two major zones: the coast Abers and the Gulf of Morbihan. Brest was a command port of the small service ports such as Le Conquet Le Faou Ildut Aber, Aber Wrac'h and Argenton. Aber Ildut was a center of armament of cabotage for the transport of wine from Bordeaux to Brest. 25 coasters of Aber Ildut took leave in Brest in 1787, including 13 in Bordeaux. Thus, this small port was the second port of armament of fleets attending Bordeaux and Brest, just after Le Conquet that provided 18 coasters in Brest. For the year 1787, the coasters of Landerneau participated not only in the direct traffic between Bordeaux and their port of origin, but also that between Bordeaux and other ports such as Brest and Morlaix. It seems that the inability of the market of Landerneau to absorb all Bordeaux wine and the high demand for these fleets by two major ports like large importers of this commodity allowed Landerneau to offer a fleet of service to other ports.

In the area of the Gulf of Morbihan, there are five major ports leading supplier of coasters in 1787: the Ile aux Moines (20), the Ile d'Arz (15) Arzon (9), Carnac (9) and Rhuys (8). Coasters of Ile aux Moines and Ile d'Arz specialized mainly in the transport of goods. They charged Bordeaux wine to Brittany ports (Lorient, Redon, Morlaix, Nantes and Saint-Malo), but also other French ports as Rochefort, Cherbourg and Calais. Similarly, the Port of Carnac also served to commercial traffic with the Brittany ports such as Vannes, Lorient and Redon. The Arzon port, provided also many vessels of fishing of sardine and those of cabotage. We can count 65 fleets (283 tons) of Arzon that brought the sardine from Belle-Ile, Port-Louis and Vannes and Concarneau in 1754. As for the cabotage service, shipmasters of 9 ships (206 tons) of Arzon left from Bordeaux to Rochefort, Redon, Vannes, Quimper, Pont l'Abbé and Morlaix in 1787. Although Paul Butel has concluded the decline of small ports of the

⁴¹ In his historical work *Histoire de la conquête de la Guyenne par les Français*, H. Ribadieu concerning the situation in the city in 1451, said: "When we knew that the French Bordeaux Blaye approached and threatened to cut off communications with England, it was resolved that a supreme effort would be made to preserve at all costs the key to the ocean." Quoted by the author: *Histoire de Blaye*, p. 155.

⁴² *Archives historiques de la Gironde*, Tome XXXVIII, « L'industrie et le commerce en Guyenne sous le règne de Louis XVI. Journal de tournée de François-de-Paul Latapie, inspecteur des manufactures en 1778 », p. 503.

⁴³ BARTHOU J., « Le transport des vins de Bordeaux vers la Bretagne par les marins du quartier de Blaye sous la Révolution et l'Empire », dans LE GARS Cl. et ROUDIÉ Ph. (dir.), *Des vignobles et des vins à travers le monde*, Talence, PUB, 1996, p. 68.

bishopric of Vannes in trade with Bordeaux in the second half of 18th century⁴⁴, the ports of the Gulf of Morbihan continued to participate in maritime traffic between Bordeaux and the international hub ports of Brittany.

Conclusion

Thus, the analysis of the commodity chain between Bordeaux and Brittany can reveal the different levels of the port networks mobilized for shipping of agrifood.

Considering the ports that receive shipments of Bordeaux wine, three types of ports seized. The first case is the international hub ports such as Saint-Malo, Nantes and Lorient that are open to international market. The second is ports as regional warehouses like Quimper, Vannes and Redon who specialized in the regional trade. The third is the military port as Brest. The development of long-distance trade and military activities strengthened port networks of major international hub ports or port of the Navy with Bordeaux. Conversely, the importance of ports of regional warehouses fell moderately in the Bordeaux wine trade in the second half of the 18th century, except Redon which had an important hinterland as the consumption market of the goods.

However, by analyzing the grain trade and sardines, we see that the secondary ports as Redon, Vannes, Quimper and Landerneau constituted the port networks that enriched the commercial exchange between Bordeaux and Brittany. Certainly, Nantes began to dominate shipments of grain to Bordeaux in the second half of the 18th century. Nevertheless, ports of regional warehouse as Redon, Vannes and Quimper were major exporters of cereals produced in their hinterland. Nantes was a major importer of cereals and ports to be supplied by the regional warehouses. Thus, these regional warehouses ports supported maritime activities of the international hub ports. Taking advantage of the high demand for sardines salted in South West France, Douarnenez, Concarneau and Port Louis specialized in shipments of this commodity. These small fishing ports did not have the purchasing power of large quantities of Bordeaux wine and other goods supplied by the Bordelais. However, as for the balance of trade, they occupied an important place in the maritime circuit between Bordeaux and Brittany.

Finally, the lack of fleets in some ports of armement justifies the use of service ports. The fleets of small ports of the bishopric of Léon, the Gulf of Morbihan and the estuary of the Gironde served traffic between Bordeaux and Nantes, Redon, Lorient and Brest. Arzon offered ships of sardine fishing in Port-Louis, Belle-Île and Concarneau. Thus, the exchange between Bordeaux and Brittany never excluded secondary ports, however, it mobilized the different layers of port networks of the French Atlantic coast.

⁴⁴ BUTEL P., *La croissance commerciale bordelaise*, op. cit., p. 374.