

The business world and French arsenals, 17-18th century

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The construction of battle fleets was undoubtedly an economic challenge for all pre-industrial Western naval powers¹. The gathering of innumerable raw materials extracted and manufactured in Europe and the colonial regions was coupled with the construction of complex transport logistics and the maintenance of arsenals forced to constantly update their technology. Although the general evolution of battle navies has led to a plethora of work in Europe and the United States², many aspects have not benefited from in-depth and comparative research. Some national historiographies remained limited in their research for a long time, such as the French school, which hesitated to undertake a global economic history of its naval power, a path long since taken by other countries.

Nevertheless, the historiographic debates caused by the creation and use of the concepts of “military revolution”³, “fiscal-military” and “fiscal-naval”⁴ state, and “contractor state”⁵ gradually contributed to a new way of studying military history, which struggled to reincorporate the preoccupations of the French academic world⁶. In addition to the historiographic controversies and differing points of view that nourished rather than invalidated one another, this renewal resulted in a fresh perspective being brought to the creation of states, in which war would have acted as a means, a catalyst. Only a centralized state, equipped with powerful administration and supported by a sizeable population capable of fulfilling substantial taxation requests, would have been able to successfully complete the modern wars. From this postulate, which, incidentally, was not without criticism, historians endeavoured to understand the mechanisms that formed the modern state in light of the human and technological artefacts necessary for

¹ Nicholas Rodger, ‘War as an Economic Activity in the “Long” Eighteenth Century’, *International Journal of Maritime History*, 1, No. 22 (2010), 1-18.

² The work devoted to European battle navies is so vast that it is impossible to give an overview of it here. Jan Glete’s work gives a good first comparative overview for approaching these issues before undertaking a more thematic or national approach as necessary: Jan Glete, *Navies and Nations. Warships, Navies and State Building in Europe and America, 1500-1860* (Stockholm, 1993).

³ Since Michael Roberts created the concept in 1956, the “military revolution” has led to many pieces of work with occasionally very different interpretations. For a general overview of this issue, we recommend: Geoffrey Parker, *The Military Revolution: Military Innovation and the Rise of the West, 1500-1800* (Cambridge University Press, 1996) (1st edition 1988); Jeremy Black, *War and the World: Military Power and the Fate of Continents 1450-2000* (London, 1998); *id.*, *A Military Revolution? Military Change and European Society, 1550-1800* (London, 1991); Brian M. Downing, *The Military Revolution and Political Change. Origins of Democracy and Autocracy in Early Modern Monarchy* (New York, 1992).

⁴ Starting from the proposal that England was an exception regarding its capacity to fight wars in the 18th century, John Brewer created the concept of the “fiscal-military state”: John Brewer, *The Sinews of Power: War, Money and the English State, 1688-1783* (London, 1989). While this theory has largely been called into question since, it paved the way for many pieces of research in economic history, which looked at determining whether an “English path” existed in the preparation for conflict. We should mention, for example, the highly suggestive work on taxation by Patrick O’Brien: ‘Fiscal Exceptionalism: Great Britain and its European Rivals: From Civil War to Triumph at Trafalgar and Waterloo’, in Donald Winch and Patrick O’Brien, eds., *The Political Economy of British Historical Experience 1688-1914* (Oxford, 2002), 245-265.

⁵ The “Contractor State Group” was founded at the University of Navarre in Spain, gathering researchers working on the close ties between the state and war, from a financial, economic and social angle. Among their recent publications: Rafael Torres Sánchez, eds., *War, State and Development. Fiscal-Military States in the Eighteenth Century* (Pamplona, 2007); H.V. Bowen and A. González Enciso, eds, *Mobilising Resources for War: Britain and Spain at Work During the Early Modern Period* (Pamplona, 2006); Stephen Conway and Rafael Torres Sánchez, eds, *The spending of states. Military expenditure during the long eighteenth century: patterns, organisation and consequences, 1650-1815* (Saarbrücken, 2011).

⁶ Researched by few French historians in the 1960s-1980s, military and naval history gradually reappeared in universities at the initiative of André Corvisier or Jean-Meyer, among others. Since the 1990s, notably thanks to the contribution of Anglo-Saxon historiography on the violence of war and that of work in France by First World War historians, all historical periods have been gradually affected by an extensive renewal of military history.

war from the end of medieval times, gradually giving rise to a global research paradigm associating military evolution with that of the state and society. Hervé Drévilion emphasised that, in short, such an interpretation recalled what Vauban had already proposed at the beginning of the 18th century, seeing a phenomenon in war that “*established subordination among the men whom it civilized and constrained to live in society, by making them capable of discipline. It is war which established laws, which maintained them and which protects justice and religion when one can employ it to this end. All the states which were and which are in the world come under its jurisdiction.*”⁷

This historiographic process clarified the mechanisms that allowed the states of modern Europe to maintain larger and better-equipped armies, especially as they were maintained in times of peace. Additionally, we are better informed about the administrations, the construction and circulation of military knowledge, the inner workings of the tax system and the impact of war on the economy of the various states. Nevertheless, a bibliographical assessment of this extensive change immediately reveals a twofold imbalance. On a global scale, England attracted the most attention and, furthermore, studies on terrestrial armies are much more numerous than those devoted to navies. The latter is particularly true of French research. Regarding the early modern period, while the *secrétariat d’Etat à la Guerre* (Secretary of State for War) has experienced renewed interest in the last 20 years, making it possible to better understand the genesis of the French army⁸, the same cannot be said for the military navy, which, after having inspired rigorous study throughout the 1970s-1990s, no longer motivates many researchers⁹. Furthermore, although the legacy of this fruitful period allowed us to refine our knowledge of naval shipbuilding, the operation of the arsenals and the world of sailors and officers, the economics of it has received little scholarly attention. This is notably the case for the “vast network of private suppliers and contractors”¹⁰ relied upon by all states wishing to succeed in building and arming their fleet. Until recently, historians were limited to gathering fragmented pieces of work, generally leading them to favour a certain socio-economic group over another or to concentrate on a particular genre of supplier (artillery, metal parts, wood¹¹ and so on). Inheriting these specific, but nonetheless valuable, perspectives, some

⁷ “*établi la subordination parmi les hommes qu’elle a civilisés et contraints de vivre en société en les rendant capables de discipline. C’est elle qui a établi les lois, qui les a maintenues et qui protège la justice et la religion quand on sait l’employer à propos. Tous les Etats qui ont été et qui sont dans le monde relèvent d’elle*” Sébastien Le Prestre de Vauban, ‘Moyens d’améliorer nos troupes et de faire une infanterie perpétuelle et très excellente’, M. Virol, eds., *Les oisivetés de Monsieur de Vauban* (Paris, 2010), 979 (See introduction by Hervé Drévilion, 967-975).

⁸ This is particularly the case for the reign of Louis XIV. Again, the extensive changes make it impossible to provide an exhaustive bibliography. An overview of the new lines of research can be provided by the following works: Hervé Drévilion, *L’Impôt du sang. Le métier des armes sous Louis XIV* (Paris, 2005); Emmanuel Pénicaud, *Faveur et pouvoir au tournant du Grand Siècle. Michel Chamillart, ministre et secrétaire d’Etat de la guerre de Louis XIV* (Paris, 2004); Thierry Sarmant and Mathieu Stoll, *Régner et gouverner. Louis XIV et ses ministres* (Paris, 2010); Jean-Philippe Cenat, *Le roi stratège. Louis XIV et la direction de la guerre, 1661-1715* (Rennes, 2010); John A. Lynn, *Giant of the Grand Siècle. The French Army, 1610-1715* (Cambridge, 1998); Guy Rowlands, *The Dynastic State and the Army under Louis XIV. Royal Service and Private Interest, 1661-1701* (Cambridge, 2002).

⁹ The state of naval and maritime research, raised at the first congress of the Groupe d’Intérêt Scientifique “Histoire maritime” and published in the *Revue d’Histoire Maritime*, is still valid today: *Revue d’Histoire Maritime, La recherche internationale en histoire maritime : essai d’évaluation*, No. 10-11 (2010), 317-356.

¹⁰ “*vaste réseau de fournisseurs et de contractants privés*” Nicholas Rodger, ‘De la “révolution militaire” à l’Etat “navalo-fiscal”’, *Revue d’Histoire Maritime*, No. 14 (2011), 259-272 (here 271). However, since Rodger’s article, some important pieces of work have been published on the relations between the state and suppliers: Richard Harding and Sergio Solbes Ferri, eds., *The Contractor State and its Implications, 1659-1815* (Las Palmas, 2012); Jeff Fynn-Paul, eds., *War, Entrepreneurs and the State in Europe and the Mediterranean, 1300-1800* (Leiden, 2014).

¹¹ Works on the suppliers of the French Navy has not benefitted from the extraordinary development of *Business history* that has, however, been at the root of various business monographs (Y. Cassis, ‘Business History in France’, F. Amatori and G. Jones, eds., *Business History around the World* (Cambridge, 2003), 192-214). This does not necessarily mean that the issue of the suppliers of war is new insofar as many pieces of work have addressed these individuals, at least peripherally.

researchers set about identifying the various individuals at the service of the fleet more precisely, by restoring the remarkable trajectories of suppliers and contractors while looking for global socio-economic factors for significant chronological periods or remarkable places¹².

In the light of old contributions and new developments, it is now possible to propose the first interpretation of the economic landscape of French arsenals between the second half of the 17th century and the French Revolutionary Wars, even though many issues are yet to be clarified and the most recent work has raised new questions.

From favouring the business elite to taking account of the socio-economic diversity at the service of naval ports

In a French context, identifying the suppliers and contractors at the service of the arsenals is very complex, as the Navy's financial archives, including contracts and surveys on suppliers, were destroyed at the time of the great reclassifications of the 19th century. Contract records and account books for the port supply ships no longer exist, other than a few rare exceptions¹³, and the only way of discovering this essential component of military activity is through the correspondence between the intendants, commissioners, and Secretary of State for the Navy, or by assembling the remaining documents within the notarial archives, a tiresome but often useful task. Notwithstanding, all this documentation tends to uncover the individuals involved with large suppliers or contractors that were discussed most by the naval administration. Engaging substantial sums and large quantities of materials, these supply contracts were the cause of many exchanges within the administration, the drafting of company instruments and particularly detailed contracts drawn up by a notary, a godsend for the historian seeking to identify these economic actors. The contribution of the more modest suppliers is more difficult from the start. Those involving a provision of less than 400 *livres tournois* did not necessarily require a contract to be signed and the intendant was free, in accordance with the needs of the arsenal, to conclude deals in order to have materials delivered or carry out works in the port. Over 400 *livres tournois*, the intendant was obliged to inform the central offices of the Secretary of State to the Navy, but this procedure does not guarantee that the historian can better identify the average supplier. Unearthing the arsenal notary within the regional archives proves much more useful for discovering the socio-economic profile of these "middlemen", of a status between the small supplier and the large contractor, the latter of which is well documented in the archives.

Furthermore, the extremely decentralized organization of the classification of French archives impeded a global study of the naval suppliers for a long time. All arsenals, whether active or not, held on to their archives, while the documents of the offices of the Secretary of State or the ministry for the Navy remained in Paris (*Archives nationales*) or in Vincennes (*Service Historique de la Défense*). Any

¹² The decade just passed saw the beginning of the revival of these matters regarding the French Navy, through certain theses and articles: Olivier Corre, 'Brest, base du Ponant. In addition, Caroline Le Mao, who is preparing a habilitation to guide the research dedicated to suppliers of the Navy during the war of the League of Augsburg, has already published two articles on these themes: Caroline Le Mao, 'Financer la Marine en temps de conflit : l'exemple de la guerre de la Ligue d'Augsbourg (1688-1697)', *Revue d'Histoire Maritime*, No 14, 285-319 ; *id.*, 'La guerre : un stimulant économique ? Bordeaux et la guerre de la Ligue d'Augsbourg, 1688-1697', *Histoire, économie et société*, No. 1 (2013), 3-17. Lastly, we should follow the work of Benjamin Darnell, who is preparing a thesis on the financing of the French Navy during the war of the Spanish Succession proposing a comparison with the *Royal Navy*.

¹³ For the Ancien Régime, the majority of contracts signed by the port intendants or the Secretary of State for the Navy have disappeared. However, some deeds have been kept in the notarial archives or in certain stores of the Service Historique de la Défense. Thus, the 5^E collection that brings together the Toulon contracts is an exceptional anomaly.

investigation concerning the Navy of the Ancien Régime that does not jointly investigate these central sources and those present in the ports would be incomplete. Moreover, studying the naval economy also entails investigating civil resources kept by the regional archives that were home to a naval port. Thus, documents by the notary dealing with the arsenal's affairs are preserved in these collections as well as those of the commercial courts and the chambers of commerce, two institutions in which traces of the Navy's suppliers can be found. This archival organization is similar to that which is found in Spain. The wave of publications of monographs on Spanish arsenals between 1990 and 2000 was based on this archival duality¹⁴. This features much less in studies on the Royal Navy, as demonstrated by Roger Knight and Martin Wilcox in their chapter "Supply Contracts: "Men of Confined Property" and the "Flower of the City" in their work on the provisioning of food between 1793 and 1815¹⁵. However, the fact that British archives are less dispersed is no guarantee that the Royal Navy's suppliers will be successfully identified, as, although contracts or copies of contracts may be found within the naval archives¹⁶, it is still difficult to retrace the individual trajectories of the various economic actors, including those with a leading role¹⁷. Furthermore, even when files indicating the socio-economic profile of the suppliers are available, care must be taken as this information can be inconsistent or false. Edouard Jukes is identified as a coal and wood merchant on the supplier lists of the arsenal of Plymouth in 1793, whereas he delivered only wheat¹⁸. Consequently, regardless of the methods and nature of archival classification, undertaking a global study on the suppliers of European navies is hard work and a lengthy task.

In the case of France, the dispersed documentation largely explains the absence of global research until recently. In addition, the methods borrowed from the historiography of the modern state from the 1970s and 1980s, led to favouring the great financial figures of the kingdom. During those years, there was an increase in work on the milieu of *grands traitants*, financial and judicial officials who agreed loans to the sovereign and invested in the state's great factories, a large number of which were reserved for supporting the war effort¹⁹. By exploiting the files in the central archives of the Parisian notaries, historians identified and described the journeys of these men, while displaying the various ways in which they intervened in the military economy to such an extent that it seems no one else was involved²⁰. The

¹⁴ Spanish research on the economic activities of the arsenals meets the same difficulties as in France. Indeed, María Teresa Pérez-Crespo Muñoz was obliged to go through the archives of the arsenal of Carthagène as well as collections devoted to the Secretary of State for the Navy kept in the General Archives of Simancas: María Teresa Pérez-Crespo Muñoz, *El arsenal de Cartagena en el siglo XVIII* (Madrid, 1992).

¹⁵ The two authors mainly used the documentation kept in the National Archives at Kew in London where the food procurement contracts in the "Contract Book" collection can be found: Roger Knight and Martin Wilcox, *Sustaining the Fleet, 1793-1815. War, the British Navy and the Contractor State* (Woodbridge, 2010) 85-114.

¹⁶ The *Royal Navy* archives does not always keep all contracts. Roger Knight and Martin Wilcox thus stress the absence of contracts for the entire end of the 18th century; Knight and Wilcox, *Sustaining the Fleet*, 103.

¹⁷ With the desire to retrace the journey of John Biggin, holder of very many supply contracts during the Seven Years' War, Christian Buchet had great difficulties: "Ainsi donc, est-on condamné pour connaître ce personnage comme le mode de fonctionnement de son entreprise, à reprendre les informations fragmentaires et éparses que nous avons pu retrouver dans les séries Marine (ADM.) du Public Record Office" [We are, therefore, destined to know this individual and the way his business functioned by the fragmented and sparse information that we were able to find in the naval records (ADM) in the Public Record Office], Christian Buchet, *Marine, économie et société. Une exemple d'interaction : l'avitaillement de la Royal Navy durant la guerre de Sept Ans* (Paris, 1999) 164.

¹⁸ Knight and Wilcox, *Sustaining the Fleet*, 103.

¹⁹ Among the most important work of the period: Guy Chaussinand-Nogaret, *Les Financiers de Languedoc au XVIII^e siècle* (Paris, 1970); Julian Dent, *Crisis in Finance. Crown, Financiers and Society in Seventeenth Century France* (New York, 1973); Michel Morineau, 'Budget de l'Etat et gestion des finances royales en France au XVIII^e siècle', *Revue Historique*, No. 2 (1980), 289-336; Alain Guéry, 'Les finances de la monarchie', *Annales ESC*, n°2 (1978) 216-239; Françoise Bayard, *Le monde des financiers au XVII^e siècle* (Paris, 1988); Daniel Dessert, *Argent, pouvoir et société au Grand Siècle* (Paris, 1984).

²⁰ Guy Richard, *La noblesse d'affaires au XVIII^e siècle* (Paris, 1974).

chapter that Daniel Dessert devotes to “economic power” in *La Royale. Vaisseaux et marins du Roi-soleil* is part of this movement, as the author indicates from the outset: “to examine the profile of the great businessmen who are responsible for the economic destiny of Navy.”²¹ Analysing the groups of men responsible for supplying the arsenals with food and gunpowder, Daniel Dessert identifies “influential money managers,”²² all born of this business elite. He concludes his analysis with the following words: “Thus, the Navy, neither in its provisioning, nor in its administration, escapes the influence of the financial world [...] Colbert completely abandoned the industrial exploitation of the maritime effort to these creatures, subordinating the future of the fleet to the fate of the fiscal-financial apparatus of the kingdom.”²³ This clear conclusion nevertheless contains some truth, insofar as the most important supply contracts were indeed granted to the kingdom’s financial elite.

Table 1. Munitions suppliers of the Navy at the end of the 17th century²⁴

Name	Occupation indicated on the company instrument
Joseph Blondel	<i>Secrétaire du roi</i>
Pierre Charles	<i>Intéressé dans la compagnie du Cap-Nègre</i>
Gaspard Dodun	<i>Avocat au Parlement</i>
Pierre Dodun	<i>Avocat au Parlement</i>
Jacques-André Du Pille senior	<i>Receveur général des finances de Lyon</i>
Jacques de Farcy	<i>Ecuyer</i>
Moïse-Augustin Fontanieu	<i>Receveur général des finances de la Rochelle</i>
Paul-Jacques Guymont	<i>Payeur des rentes de l’Hôtel de Ville</i>
Jérôme Hélyot	<i>Receveur général des finances de Bourges</i>
Jean-Baptiste Joly	<i>Secrétaire du roi</i>
Henri Lambelin	<i>Secrétaire du roi</i>
Cyr Monnerque	<i>Ecuyer</i>
Isaac Nicolas de Lussé	<i>Receveur général des finances de Bordeaux</i>
Pierre Pellard	<i>Intéressé aux affaires du roi</i>
Joseph-Alexandre Thierry	<i>Contrôleur général de la marine</i>

In fact, there is no shortage of examples of these financial structures capable of getting their hands on the largest military contracts: Samuel Daliès de la Tour’s organization under Louis XIV who sent iron, coal, wood and food from the south-east of the kingdom to the arsenals²⁵; Pierre Babaud de la Chaussade, the “king of iron”, part of the financial world during the 1730s and 1740s, under the aegis of

²¹ “examiner le profil des gros entrepreneurs qui se chargent du destin économique de la Marine” Daniel Dessert, *La Royale. Vaisseaux et marins du Roi-Soleil* (Paris, 1996) 62.

²² “d’influents manieurs d’argent” *Ibid*, 63.

²³ “Ainsi la Marine, pas plus dans son approvisionnement que dans son administration, n’échappe-t-elle à l’emprise du monde de la finance [...] Colbert a abandonné de façon absolue l’exploitation industrielle de l’effort maritime à ses créatures, subordonnant l’avenir de la flotte au sort de l’appareil fisco-financier du royaume” *Ibid*, 73.

²⁴ *Ibid*, 292.

²⁵ Daniel Dessert, *Les Daliès de Montauban : une dynastie protestante de financiers sous Louis XIV* (Paris, 2005).

the Secretary of State to the Navy, Maurepas, turning the forging mills of Guérigny and Cosne-sur-Loire into major infrastructures to supply iron and anchors to the Navy²⁶; Jean-Charles Dujardin de Ruzé who seized the contracts of the Baltic naval stores from the 1760s and until the end of the American War of Independence while transporting French wood and hemp²⁷. Lastly, the shareholders of the Creusot forging mills in 1782, truly representative of the financial elite of the end of the Ancien Régime, swift to modernize manufacturing networks in order to continue to fulfil a disproportionate amount of the military's requirements²⁸. By means of the "savonnette à vilain", an expression denoting the purchase of a financial or judicial position, these men, heads of considerable fortunes and sometimes manufacturing infrastructures, infiltrated a restricted milieu, in which maintaining relationships of any nature – financial, economic, matrimonial, professional – made it possible to be involved in the king's affairs. Moreover, while the fall of monarchy involved the cards being dealt among these actors, military market concentration in the hands of a small elite remained the norm following the Revolution²⁹.

A comparison with the provisioning of the Spanish fleet demonstrates a similar socio-economic structure, although some slight differences can be found. The financial world and economic actors close to power were the first to monopolize the large military contracts (asientos). The work of Rafaël Torres Sánchez and Augustín González Enciso have shown, with many examples, that this hyper market concentration did not always favour the provision of quality material. Indeed, in the case of the Menorca expedition of 1781-1782, the fuelling of the fleet was successively entrusted to suppliers who had a monopoly, without any concern for their effectiveness. Geronimo Rivera, who can be described as a financier, was the first to try to fulfil the entirety of the fleet's requirements by receiving a whole series of exclusive privileges. His failure allowed other actors to establish themselves and it was ultimately Antonio Valencia Galaber, the father-in-law of Francisco Gabarrús, the most important financier at the Madrid court of the time, who became the principal supplier³⁰. Monopolies were commonplace and made it possible either to respond to an urgent request, or to permanently set up an industry that did not yet exist in Spain. Jean Curtius was the first to be granted the monopoly for the manufacture of canon in Liège in first half of the 17th century and this type of bestowal continued until the end of the 18th century. The factory of Eugui, which manufactured cannonballs, was the only one in Spain at the end of the 17th century and the contractor Jose de Aldaz was granted the exclusive privilege in 1689. His service to the state earned him many tax exemptions and rapid social advancement, as he became marquis of Monte Real and a member of the Consejo de Hacienda in 1705³¹. The granting of an exclusive privilege was a solution also used by the French state to facilitate the pooling of contractors around industrial military

²⁶ Paul-Walden Bamford, *Privilege and Profit: a business family in eighteenth-century* (Philadelphia, 1988).

²⁷ Olivier Corre and David Plouviez, 'Jean-Charles Dujardin de Ruzé, entrepreneur et fournisseur de la Marine française (1716-1783)', *Histoire, Economie et Société*, No. 1 (2015).

²⁸ Other than the king, who has an 8.3% stake in the metal company, we find financiers and businessmen Baudard de Sainte James, brothers Perier, Sérilly, de Wendel, Veymeranges and even Bettinger; Plouviez, *La Marine française*, 368-369.

²⁹ Louis Bergeron, *Banquiers, négociants et manufacturiers parisiens du Directoire à l'Empire* (Paris, 1978).

³⁰ Rafaël Torres Sánchez, 'Monopoly or the Free Market: Two Ways of Tackling the Expenditure: The Expedition to Minorca (1781-1782)', Stephen Conway and Rafaël Torres Sánchez, eds., *The Spending of States: Military Expenditure during the Long Eighteenth Century: Patterns, Organization and Consequences, 1650-1815* (Saarbrücken, 2011), 313-338; On the blending of economic and political affairs, see the contributions of Rafaël Torres Sánchez ('Financiers et politiques. Francisco Montes and François Cabarrus (1770-1790)') and Augustin González Enciso ('Les finances royales et les hommes d'affaires au XVIII^e siècle'): Anne Dubet, eds., *Les finances royales dans la monarchie espagnole* (Rennes, 2008).

³¹ Augustin González Enciso, 'Military Expenditure and Entrepreneurial Promotion in Modern Spain: An Unsuccessful Expedient. The example of the Eugui munitions factory, in Stephen Conway and Rafaël Torres Sánchez (ed.), *The Spending of States*, 285-311.

projects, but without the intention of creating monopolies, even if they did occasionally appear³². The presence of a socio-economic elite and concentration in military markets are shared characteristics of both fleets' supply systems, and while the second aspect seems to be much more pronounced in the Spanish case, this does not exclude the existence of socio-economically diverse suppliers³³.

On the other hand, in the British model, where the state depended on the market economy to meet its military needs³⁴, there was no concentration and cases of collusion between Royal Navy authorities and its suppliers were rare. An analysis of these men shows that they were merchants, traders or specialists, such as butchers, bakers or millers. Larger suppliers existed but they never managed to collate very many contracts. During the Seven Years' war, John Biggin, the largest contractor at the service of the Royal Navy, obtained only a third of the contracts for supplying the arsenals, and only for a short duration³⁵. In addition, these men were not part of the political or economic elite of the country; Biggin was one of a few with the title "squire" in correspondence with the Navy³⁶. Furthermore, the case of Charles Flower, an importer of Irish oxen for the arsenals and colonies during the French Revolutionary Wars, who became an Alderman of London in 1808 and Knight in 1809, was an exception, as, overall, supplying the fleet featured a multitude of small suppliers, often local and not meeting the needs of the military exclusively³⁷. This is the case, for example, for the biscuit orders for the Deptford arsenal, where the contractor Richard Clarke clearly stands out between 1793 and 1800, before being one supplier among approximately 20 others in 1809³⁸.

Nevertheless, the business elite was crucial in the construction of the French naval power. Yet, historical research focussing on only this social group has obscured the presence of many other actors, those on a more modest economic scale, but nonetheless essential when considering the mechanisms of naval mobilization. The port archives and those of the notaries of the intendant and commissioners have provided information which did not necessarily appear in the collections of the offices of the Secretary of State for the Navy. In addition to the financial and judicial officials, we find many traders, merchants and craftsmen, whose employment does not seem to necessarily be short-term. There are many cases of, for example, private individuals and specialist merchants benefiting from a request from the Navy to buy their goods, or known craftsmen, regularly solicited to manufacture an object. Hilaire Givry, sharecropper residing in Saint-Lors in Poitou, was committed to providing 33 oaks to the arsenal of Rochefort in 1734³⁹. A certain Chazé, master ironmonger, provided borax and *soudure forte* to the arsenal of Brest during the American War of Independence, while the "Widow David and son" sold linseed oil to the naval port from her factory in Morlaix⁴⁰. For use in the colonies, Simon delivered 60 barrels of tar to Rochefort in 1732⁴¹. Each arsenal maintained a local pool of contractors regularly solicited to meet the needs of

³² David Plouviez, 'Privilèges et économie de la guerre : la construction du réseau d'entreprises militaires en France au XVIII^e siècle', Guillaume Garner, eds., *L'Économie du privilège en Europe occidentale, XVI^e-XIX^e siècle*, to be published in late 2014.

³³ Augustin González Enciso, 'Asentistas Y Fabricantes : El Abastecimiento de Armas Y Municiones Al Estado En Los Siglos XVII Y XVIII', *Studia Historica :Historia Moderna*, vol. 35, 2013, 272.

³⁴ Stephen Conway, *War, State, and Society in Mid-Eighteenth-Century Britain and Ireland* (New-York, 2006), 83-114.

³⁵ Buchet, *Marine, économie et société*, p. 149-152.

³⁶ *Ibid.*, p. 164.

³⁷ Knight and Wilcox, *Sustaining the Fleet*, 107-108; Bernard Pool, *Navy Board Contracts, 1660-1832* (Hamden, 1966), 77-109.

³⁸ *Ibid.*, p. 107.

³⁹ SHD Mar. Rochefort 1/E/363 f° 53 (10 April 1734).

⁴⁰ "Veuve David et fils" SHD Mar. Brest 1/E/541 f° 197 (12 June 1775), cited in Corre, *Brest*, 650.

⁴¹ SHD Mar. Rochefort 5/E/2 16, cited in Martin, *Rochefort*, 209.

naval shipbuilding or maintenance of port infrastructure. The transactions were never particularly substantial, but they were nevertheless vital for the continuity of operations.

A business world modelled by the state for the needs of war?

All these examples contributed to retracing the economic processes generated by naval activity, while underlining the diversity of the socio-economic profiles of the suppliers. In addition to the general contracts granted to companies dominated by capital of noble origin, a number of other transactions generating a significant turnover of naval suppliers can be found (cf. table 2).

Table 2. Distribution of naval suppliers according to the number of signed contracts (in per cent)

	Contracts signed in Bordeaux during the war of the League of Augsburg (1688-1697) ⁴²	Contracts signed for supplying the fleet (1723-1792) ⁴³	Contracts signed for supplying the colonies in Rochefort (1723-1792) ⁴⁴
Single contracts	67.5	75.5	71
2 to 8 contracts	27	22.6	27
9 contracts and above	5.5	1.9	2

If the French Navy largely inherited this economic landscape in which to carry out its provisioning, the fact remains that its needs had an impact on the composition of the economic networks able to fulfil military orders. In other words, the French Navy developed a business strategy allowing it to turn to various types of partners according to its urgent needs or the specificity of the required supplies.

In the case of structural timber, the French Navy tended to finalise contracts for increasingly large quantities intended for all the arsenals at once. This was called a general contract at the time. Granted to large companies accustomed to supplying the Navy, these contracts were effective tools for quickly refilling stocks. Duke Choiseul, French foreign minister, made use of them during the 1760s, particularly with the company *Compagnie Péan de Saint-Gilles* that provided wood to all the arsenals of the Ponant fleet between 1763 and 1769. But even during the peak of general contracts, the Navy still depended on small suppliers for fifteen to twenty per cent of its wood supply, involving, on average, 8,000 to 9,000 cubic feet per contract⁴⁵. This economic strategy can generally be applied to other naval supplies. During the American War of Independence, the Brest-native trader, François Labous, signed a contract for ox,

⁴² Le Mao, 'La guerre : un stimulant', 13. The author took an inventory of the contracts signed by the naval commissioner Lombard in Bordeaux during the war of the League of Augsburg, totalling 191 contracts.

⁴³ Plouviez, *La Marine française*, 122-124. Proportions calculated on the base of 1,319 supply contracts for wood, hemp, sails, metal pieces and artillery.

⁴⁴ Martin, *Rochefort*, 206. The author counted 186 contracts for service of the colonies in Rochefort.

⁴⁵ Plouviez, *La Marine française*, 138-141.

cow and calf skins at a better price than those of the official general contractor, Dujardin de Ruzé⁴⁶. Certain products traditionally included in the general contracts of the large suppliers were sometimes excluded to be entrusted to other contractors considered more skilful and often less greedy regarding the earnings they expected from their deal with the Navy. Thus, although, in 1776, Claude Fay, supplier for the arsenal of Brest, entered into an agreement for “the food for the vessels & other ships of his Majesty” with the minister, fresh vegetables and sorrel were the subject of separate contracts granted to François Gallou, a small merchant in the city⁴⁷. It was believed, for a long time, that the recourse to local suppliers could be only circumstantial, notably in times of conflict. Men who would not have enjoyed the favour of the intendant in times of peace, would have been in demand in the event of a break in the supply chain, particularly if they were efficient. For example, Mathieu Lagourgue, Bordeaux supplier of bray and tar from the Landes region, profited from the War of the League of Augsburg. This man became the preferred contact of the naval commissioner in Bordeaux for these raw materials during the entire conflict, generating a profit of 113,000 *livres tournois*⁴⁸.

Such examples emerge time and again and emphasise to what extent the French Navy, dependent on certain supplies from abroad, was helpless when the major shipping lanes were disrupted by the Royal Navy. But the local and regional pools of contractors were far from being used only in times of need. The examples relating to structural timber contracts demonstrate the same situation as those referring to the small suppliers of the arsenal of Brest. The economic actors in the surrounding area often proved more flexible and adaptable regarding the production of objects requiring particular care and attention. This is the case, for example, for communities of nailers and ironmongers physically present around the arsenals and solicited to supply the construction sites when large metallurgical manufactures balked at fulfilling the demands of the builders, who sometimes requested parts of a specific gauge, outside of the scope statement established when the contract was signed. When it was a case of specific supplies that port authorities could have “to measure”, many contracts were granted to local suppliers and craftsmen. To supply kitchen utensils to the colonies, the arsenal of Rochefort regularly made deals with the ironmongers of the city. Moreover, the creation of the hammer forging mill of the Dardennes, near the arsenal of Toulon, came about due to the desire to have an establishment able to respond to extraordinary requests. In 1747, the merchant-trader Pierre Aiguillon proposed the idea to the intendant of the arsenal, who took it on board. The forging mill of the Dardennes had to be able “to manufacture iron of all sizes”⁴⁹, while recycling the materials used or rejected by the arsenal. From the 1750s to the French Revolution, many contracts were signed between the forge and the arsenal, creating business for the Aiguillon family but also the engineer-builders who could obtain metal parts to measure. On the eve of the American War of Independence, the intendant of Toulon Bourgeois of Geudreville endorsed the company, reminding the minister of the need “*to support an establishment whose utility is generally unanimous [...] by the ease with which one can have an amount of material produced that one could only obtain at a great expense in ordinary forges.*”⁵⁰ Babaud de la Chaussade’s immense smelting complex in Nivers had difficulty widening the range of its products for economic reasons. Consequently, the needs of the arsenals created a local production network composed of modest but reactive establishments, which

⁴⁶ Corre, *Brest*, 648.

⁴⁷ “*Traité des vivres pour les vaisseaux & autres bâtiments de sa Majesté*” SHD Mar. Brest 1/E/190 f°797 (10 May 1776).

⁴⁸ Le Mao, ‘La guerre : un stimulant’, 15.

⁴⁹ “*fabriquer des fers de toutes dimensions*” AN Mar. B/3/449 f°179 (1746) ; B/2/333 f°222 (10 July 1747).

⁵⁰ “*soutenir un établissement dont l’utilité est généralement unanime [...] par la facilité avec laquelle on peut faire fabriquer autant d’ouvrage qu’on ne pouvait se procurer qu’à très grands frais dans les forges ordinaires*” SHD Mar Toulon 5/E/181 f°7 (10 January 1775).

gave naval engineers the possibility to intervene. Thus, in the middle of the century, when the French arsenals lacked “arched” pieces of wood, the manufacturers tried replacing them with cast iron components. In Rochefort, a collaboration was agreed upon between the arsenal and the supplier, More, in 1751 for the casting of 33 arched iron components⁵¹. It seems that these trials were not conclusive, but they show that the recourse to local economic actors was also a means of innovation for the Navy.

The intendants generally stated their satisfaction at being able to work with local suppliers. It is clear that the colossal needs of the arsenals could only be satisfied with this type of economic actor gathering the raw materials from the surrounding area. Yet, an internal debate went on within the Navy, from the times of Jean-Baptiste Colbert (1619-1683) until the Revolution, on the scope of contracts and their duration. Should short contracts with a multitude of small suppliers be increased or, on the contrary, should the main proportion of requirements be entrusted to powerful companies by signing long term contracts? This debate on the best economic strategy to adopt re-appeared periodically without being fully resolved. In reality, this issue was related to the context and higher or lower presence of economic actors near the arsenals, each calling for a different solution. For example, Rochefort could depend on an active and dense local market providing access to plenty of potential suppliers throughout the Ancien Régime. On the contrary, the situation in Brest was more complex, the arsenal could draw from a pool of powerful local economic actors. The deals contracted to small local suppliers were proportionally less significant in Brest than in Rochefort and this was undoubtedly a handicap for the most important arsenal of the kingdom. All the European fleets encountered such issues, with very different solutions from one state to another. At the end of the 18th century, the solution of the English naval authorities seemed to be clearest, confirming its preference for small suppliers when possible⁵². The political decision-makers elsewhere, France included, hesitated lengthily over the most pertinent economic formula to adopt.

Current research has thus considerably changed our perception of the economic actors at the service of naval warfare, while showing that the French state had been able to develop an economic and commercial policy fulfilling the requirements of constructing military vessels and supplying the colonies. While it is clear that sustaining the naval power involved the mobilization of suppliers of diverse socio-economic profiles, precisely evaluating the participation of each one of these groups it is, nevertheless, a complex undertaking, taking into consideration the research available. Furthermore, if this evaluation is possible, it would be necessary to distinguish the periods of conflict from those of peace as well as the nature of the supplies delivered to the arsenals. In addition, as accurate as this evaluation could be, it would be, by definition, an image at one point in time when the business dynamics and demography combine to retrace the economic networks at the service of the war effort. We are, therefore, still far from being able to precisely dissect the economic drivers of French naval mobilization. The work in progress comprises invaluable advances which should lead to a global research program preceded by the

⁵¹ SHD Mar. Rochefort 1/E/379 f°191, the Intendant of Rochefort to the ministry of the Navy (1 May 1751).

⁵² A letter from the Treasury dated December 1796 is particularly eloquent: *“Possibly some persons of extensive capital might be found who would be willing, under the condition of such mode of payment, to become the Contractors for some of the articles required for the service of the victualling, but we are persuaded the measure would also be attended with the most disadvantageous consequences; for the persons usually dealing in the articles we provide, being in general men of confined property, and having occasion also in their ordinary mercantile transactions for the employ of the capitals they respectively possess, would unavoidably be excluded from the opportunity of supplying government but through the medium of persons of large Fortune, whereby that fair competition which we conceive ought to be preserved in making bargains for the service of this department would be greatly impeded, if not totally destroyed; and the Crown would be inevitably exposed to the payment of such prices as the inclination of the Parties might lead them to demand.”* Knight and Wilcox, *Sustaining the Fleet*, 108.

development of a typology of economic actors, one of the principal obstacles when trying to carry out a global and comparative identification of these men.

Table 3. The socio-economic status of the suppliers at the service of the colonies in Rochefort in the 18th century⁵³

<i>Marchands</i> [Merchants]	43%
<i>Négociants</i> [Traders]	31%
<i>Artisans</i> [Craftsmen]	23%
<i>Munitionnaire</i> [Munitions suppliers]	1%
Other	2%

If a “financier” constitutes a well-defined social and economic status, this is even truer of terms and expressions such as “merchant”, “trader” and “small supplier”. However, the designation of economic actors is rather haphazard from one document to another, including the files produced by the Navy and other state institutions. Can the “merchants” and “traders” that take on supplying the products sent to the colonies from Rochefort be compared with their counterparts indicated by the same terms carrying out other work in France and elsewhere? (cf. table 3) These categorizations, in use in the early modern period or subsequently created by historians, do not necessarily pertain to the same individuals from one study to another and a homogenisation is essential in order to establish viable comparisons.

Capitalist dynamics and the porosity of the various socio-economic supply groups

Ultimately, the legitimate desire to identify the partners of the Navy and construct a typology of these socio-economic groups runs the risk of side-lining their permeability or, at the very least, their complementary nature. Concluding a contract with a company comprised of financiers does not necessarily mean that the supply process involves solely men from this social and economic category. It is necessary to consider the various possible combinations that execute a military contract, from collaboration with other economic actors of dissimilar social status, to complete or partial subcontracting of the supplies, which may also involve men of different social standings. Consequently, constructing an overview of the partners of the Navy must be accompanied by an analysis of their networks, socially more heterogeneous than they first appear; another key to understanding the economic processes of naval mobilization.

Thus, the various projects that followed from the 1970s relating to large supply companies had the principal aim of dissecting their capital. This major issue was difficult to resolve, since the financiers and *traitants* that invested in this kind of business wanted to remain anonymous. The contribution of research on the fiscal-financial system of the French monarchy enabled the powerful networks to be retraced while uncovering the nature of the mechanisms that mobilised the money necessary to the companies that matched the insatiable needs of the fleet. However, how capital was constituted does not

⁵³ Martin, *Rochefort*, 207.

fully explain the management of a military company or the know-how and logistics employed during the supply process. Approaching these aspects would make it possible to go beyond the first circle of businessmen that form the company or factory's shareholders, and discover another level comprised of traders, merchants and craftsmen. It is on this level that the daily reality of provisioning took place and constitutes the most promising ground for future historical research.

Founded in 1763, the Petel company, then *Péan de Saint-Gilles et Cie* from 1765, illustrates how responsibilities were shared between investors and the men responsible for the concrete aspects of the supply process. At the end of the Seven Years' war, French arsenals were in a critical condition and Duke Choiseul began restocking raw materials in order to restart the construction of vessels and frigates as quickly as possible. The Navy, therefore, favoured the granting of substantial general contracts to ad hoc companies. The preamble to the Petel company's contract is clear regarding the objective sought by the Navy, since it concerns "the general supply to all the ports of the ocean of all the raw goods of France necessary to construct equipment and repair the vessels of the King, in woods of all kinds and iron, hemp and others objects."⁵⁴ In fact, this company dealt solely with wood, accounting for up to seventy-three per cent of the deliveries to the arsenals of the Ponant fleet at the height of its activity.

Table 4. Composition of shareholders
of the general supply company Petel et Cie in 1763⁵⁵

Name	Occupation indicated on company instrument	Registered address	Investment in the company (1 sol = 100 000 livres tournois)
Arnaud Lamaignère	<i>Négociant</i>	Le Havre	6 sols
Pierre Claude François Simphorien Gigot de Garville	<i>Ecuyer, fermier général de Bretagne</i>	Paris	3 sols
Jean Louis Michel Petel	<i>Ecuyer</i>	Paris	4 sols (3 sols for the party concerned and 1 sol for a third unnamed party)
Bon Thomas Gohel	<i>Fournisseur de la marine (bois)</i>	Compiègne	2 sols 6 deniers
Jean-François Allard	<i>Fournisseur de la marine (bois)</i>	Angers	2 sols 6 deniers
Claude-Raphaël and Jean-Vincent Dufour	<i>Fournisseur de la marine (chanvre)</i>	Troyes	2 sols 6 deniers
Thomas Brémontier and son	<i>Fournisseur de la marine (bois)</i>	Rouen	1 sol
Charles-Emmanuel de	<i>Secrétaire des</i>	Paris	2 sols

⁵⁴ "la fourniture générale dans tous les ports de l'océan de toutes les marchandises du cru de France nécessaires à la construction équipement et radoub des vaisseaux du Roy, tant en bois de toute espèce que fer chanvres et autres objets" AN Min. cent LXVI 541 (28 April 1763).

⁵⁵ *Ibid.*, the order of the names corresponds to the order on the company instrument.

Quélus	<i>commandements de Monseigneur de Lambesc; avocat au parlement de Paris</i>		
Jean-Baptiste Ledoux	<i>Receveur des tailles</i>	Paris	1 sol
Benoît de la Motte	?	Paris	1 sol
Pierre Henry Péan de Saint-Gilles	<i>Négociant, procureur général</i>	Paris	1 sol 6 deniers
Antoine Pannelier	<i>Receveur général des domaines et bois de la généralité d'Alençon ; payeur des rentes</i>	Paris	2 sols (joint investment)
Robert Caron	<i>Ecuyer, payeur des rentes de l'Hôtel de ville</i>	Paris	
Julien Gaillard	<i>Conseiller, médecin</i>	Paris	1 sol
Charles François Filleul	<i>Ecuyer, payeur des rentes de l'Hôtel de ville</i>	Paris	1 sol
Pierre Jeliote	<i>Pensionnaire du roi</i>	Paris	1 sol

The financial and judicial officials accustomed to this type of military contract naturally had a higher stake in the company as they provided more than half of the capital (cf. table 4). Among them, we find some *payeurs des rentes de l'Hôtel de ville*, a powerful financial institution providing credit mainly used to finance the wars of monarchy from the 17th century⁵⁶, a *receveur des tailles* for the Paris district, the *fermier général* of Brittany and an *avocat au Parlement de Paris*. Within these shareholders, found in all military companies, it is most interesting to count the *fournisseurs de la marine*, or naval suppliers, whose socio-economic status is not clear, but who undoubtedly shouldered the logistical aspects of the contract, while some of them also provided part of the capital. Merchants and traders, whether in the process of joining the business nobility or not, had already proved themselves reliable, by signing, individually or in partnerships, contracts for structural timber before 1763. Profiting from the newly available landholdings of the old nobility, the technical and commercial know-how of these hardened men allowed the company to be run effectively and was, without doubt, the key to success⁵⁷. Moreover, the Navy's archives for this period make it possible to note partnerships with other wood suppliers, who were not involved with the company's capital yet signed subcontracting contracts in order to help fulfil the company's engagements with the Navy. Around Paris, Myons provided the company with wood, while Cazenove de Bayonne did the same for the arsenal of Rochefort. It is thus necessary to add many names to those listed in table 4, making it possible to retrace a network covering the majority of the wooded areas of the kingdom.

⁵⁶ Mathilde Moulin, 'Les rentes de l'Hôtel de ville de Paris sous Louis XIV', *Histoire, économie et société*, No. 4 (1988) 623-648. In addition, we can refer to Kathia Beguin's work on these issues: *Financer la guerre au XVII^e siècle : la dette publique et les rentiers de l'absolutisme* (Paris, 2012); 'Estimer la valeur de marché des rentes d'État sous l'Ancien Régime', *Histoire et Mesure*, No. 2 (2011), 3-30.

⁵⁷ Jean-François Belhoste, 'Bois et fers pour la Marine : deux fournitures extraites de la forêt, XVII^e-XVIII^e siècles', Andrée Corvol, eds., *Forêt et Marine* (Paris :1999), 95-112 (here 107).

Without recourse to these intermediaries, no company, however powerful, could ensure supplies of this magnitude. Retracing the subcontracting networks is, therefore, a way to highlight, as well as measure, the variety of the socio-economic profiles involved in military provisioning, and uncover the agreements made between suppliers in an attempt to win contracts with the naval ports more easily. An incident on a vinegar shipment for the Royal Navy by the company Robert and Arthur Potts at the beginning of the 19th century uncovers a vast subcontracting network binding the principal contractors to five other vinegar manufacturers. Beaufroy and Co also took the same measures at that time, distributing its commitment to the Victualling Office among four other producers⁵⁸. In the case of salted meat provisions, Christian Buchet brought to light the agreements that existed between several suppliers to secure contracts (cf. table 5). There are numerous scenarios of suppliers trying to win the invitation to tender by mentioning an official partnership, or by concealing one.

Suppliers of salted meat to the Royal Navy in London, 1756-1763⁵⁹

Individual traders		
James Adams	John and Peter Lefebvre	Daniel Ponton
Thomas Ayres	Isaac Lefebvre	Edmond Russel
Thomas Bell	Lloyd	Allen Spencer
James Berry	Thomas Lewis	H. Wilkes
Georges Deake	Jos. Mawbey	John Woodard
Edward Edes	Peter Mellish	Roger Wright
William Ford	Samuel Mellish	
T. Hurford	John Pass	
Trader partnerships		
Barnevelt and Thownshend		Harding and Ford
Bell and Grace		Lewis and Mellish
Bell and Lefebvre		Lewis, Spencer and Woodard
Bell and Masson		Lewis and Spencer
Carter and Edes		Lewis and Woodard
Grace and Olier		Mawbey and Foster
Grace, Lloyd and Olier		Mellish and Preddy
Harding and Cartier		Woodard and Carter

Excluding the atypical case of the *Péan de Saint-Gilles* company, such partnerships were a regular occurrence in France. The majority were official, as was the case, for example, for Jean-François Rubichon and Benoit Brizard during the 1750s. These two men were suppliers of wood from the Dauphiné province for the arsenal of Toulon from the 1730s and worked individually for this period, whereas the contracts signed during the Seven Years' war were under a company name that linked the

⁵⁸ Knight and Wilcox, *Sustaining the Fleet*, 106-108.

⁵⁹ Buchet, *Marine, économie et société*, 152

suppliers. From a desire to pool working tools or increase financial and logistical capacities in order to execute military contracts, these partnerships multiplied in the second half of the 18th century, during which period the demands of the fleet were extremely high. Plainly put, these partnerships could be the result of suppliers' economic difficulties, connected to a fall in their business activity or the consequence of unpaid debts from the Navy. For example, Jacques Antoine Cantin, wood supplier to Rochefort from a family of merchant coopers, filed for commercial bankruptcy before the commercial court of La Rochelle on 7 August 1760. Before this outcome, Cantin had made his disastrous situation known to the intendant of Rochefort and requested that the payments the Navy owed him be paid quickly. At that time, the ministry of the Navy was no longer in an enviable financial position and a whole series of payments were delayed. This proved disastrous for Cantin, who had to give up his business. However, he reappeared, this time as an associate of Capelin, another wood supplier, contracted by the arsenal of Rochefort during the 1770s for substantial contracts of between 20,000 and 30,000 cubic feet⁶⁰. However, it appears that many partnerships were unofficial and the result of prior agreement between merchants and traders to skew the invitation for tender organized by the naval ports each year. At the end of the 18th century, the intendant of Rochefort confided in his minister about these practices:

"It happens every day, *Monseigneur*, that the successful tenderers are supported by those who have competed against them and the council could not refuse, without running the risk of not finding a guarantor, which would stop sales. Perhaps, as the council of the navy observes, this merger could give rise to well-founded suspicions of collusion. We did not realize until now and if it were the case, we do not see means for preventing it, other than requesting foreign guarantors which would not have appeared in the sale and is impossible here.⁶¹"

All of these examples thus prompt us to go beyond the individual presented at the signing of a military contract. Whether the contract was signed by a straw man intended to conceal a coterie of noble shareholders, a well-established company, a merchant or a known trader, the complexity of supplying a fleet almost always entails the participation of many actors with different profiles. It is thus important to identify all the branches of these networks precisely in order to piece together the socio-economic bedrock on which the French naval power stood as accurately as possible, and to be able to make comparisons with the other navies of Europe.

Naval suppliers: participants in the French naval power?

Considering the suppliers of the Navy as potential levers of naval power entails going beyond identifying these suppliers to inquiring into their know-how and daily work, while considering that a military transaction did not lead solely to the enrichment of the suppliers responsible, but also benefited

⁶⁰ Plouviez, *La Marine française*, 165.

⁶¹ "Il arrive tous les jours, *Monseigneur*, que les adjudicataires sont cautionnés par ceux même qui ont concouru avec eux et le conseil ne pouvait refuser, sans s'exposer à ne pas trouver de cautionnement, ce qui arrêterait les ventes. Peut-être, comme le conseil de marine l'observe, cette réunion pourroit faire naître des soupçons fondés de collusion. On ne s'en est pas aperçu jusqu'à ce moment et si cela était on ne vois pas de moyens pour l'en empêcher à moins d'exiger des cautions étrangères qui n'auraient pas paru à la vente ce qui est impossible ici" Jean-François Claverie, 'Les marchés de fourniture et de travaux dans la marine royale au XVIII^e siècle' (Unpublished PhD thesis, University of Angers, 1996), 276.

the Navy itself. It is clear that committing to supplying military material to the state does not boil down to a simple commercial deal between a buyer and a seller. Analysis of the supply contracts of the Navy reveals, beyond the transaction, two levels of collaboration which indisputably allowed France to maintain its position of naval power.

Indeed, some of the suppliers were characterized by their capacity to provide information, to become mediators facilitating the commercial deals between the Navy and an economic partner, particularly abroad, or to occasionally intervene on the ground to arrange such agreements. These services, some of which did not appear in the supply contract clauses and remained unofficial, made it possible to compensate for the deficiencies of the French fleet's supply system as much as possible. The hinterland supplying naval material became so vast that France did not always have the human and financial means at its disposal to undertake development works or to have agents abroad to evaluate purchase opportunities or contact potential suppliers. In addition, certain economic partners of the Navy stood out by considerably widening their sphere of activity at the service of the state. In 1769, the wood supplier and director of the foundry of Ruffec, Chrétien Blanchet, collaborated with the Navy to improve the navigability of the Charente. In the same year, the contractors Clainche and Bellabre submitted a proposal for a project to develop the Huisne for the evacuation of wood cut in the Perche and Maine. Pierre Babaud de la Chaussade, an omnipresent actor when studying naval provisioning, was responsible for the development of the Doubs River when wood from Montebéliard was intended for the arsenal of Toulon in 1736. In addition, his business connections, notably in the Dutch Republic, allowed France to formalize commercial contacts and to propose drafting a technical document, *tarif*, for Baltic wood during the 1740s. Through their work, Babaud de la Chaussade and his colleagues optimized supplying the battle navy and became, in fact, stakeholders in the naval power. The returns from this type of intermediation were not solely financial. Admittedly, the digging of a river bed or the construction of a road is subject to payment by the state, which sub-contracted the works that it could not have carried out alone. But if the supplier provided information or became the relay between the Navy and other economic actors, there was no cash remuneration and gratitude was expressed by other means. There are many ways to thank servants of the state: the chance to obtain an exclusive privilege at the time of the foundation of a company, granting of a title of nobility, possibility of integrating into new business networks. The impact of these social benefits is still poorly measured, but there is no doubt that they were part of the upward social mobility strategy of the "arms manufacturers of the State"⁶².

However, there were few economic actors capable of carrying out tasks related to their supply contract in the 18th century and there is a second level at which almost all suppliers took part in the naval power. The French Navy, like its counterparts, developed a range of restrictive qualitative standards for the choice of its materials, which it rigorously contractualized in the various contracts granted to its suppliers. However, the suppliers were not passive with regard to this effort to standardize and, while some resisted, the majority of suppliers went along the movement, or even anticipated it. Indeed, the first wood *tarifs* were created at the initiative of the suppliers who wanted to be able to depend on a standardized technical document in order to avoid their deliveries to the Navy being refused. These documents specified various measurements of the pieces of wood, their gauges, the qualities expected, as well as their price. The *Tables pour les mâts d'Auvergne et de la Baltique* [Tables for the masts of Auvergne and the Baltic] in 1709 and *Tarif des bois d'Aunis et de Saintonge* [List of the wood of Aunis

⁶² This expression, "armuriers de l'Etat" in the original, refers to the title of Patrick Mortal's work, *Les armuriers de l'Etat du Grand siècle à la globalisation, 1665-1989* (Villeneuve d'Ascq, 2007).

and Saintonge] in 1701, appeared before the Navy decided to create a document to be used by all arsenals. While the arsenal manufacturers quickly took the initiative of drafting these documents, primarily with the intention of pacifying their relations with suppliers, a constant and fertile technical dialogue between the co-contractors continued. The evidence of this dialogue can be seen, for example, in the installation of the large gun foundries in Indret and Creusot during the American War of Independence. These infrastructures were based on a three-way relationship between the Navy, the economic investors able to support the project and the engineers capable of ensuring the transfer of technology from England and adapting it to France⁶³. The Navy worked out complex scope statements to, for example, define the casting of these pieces of artillery, which went beyond the size and weight of canon, to also define metal quality. In the case of the foundries, as for all other military supplies, how did the suppliers deal with these standards? Did they have any room for manoeuvre when interpreting the Navy's requirements? These issues are far from being resolved today, yet they represent an undeniable strategic issue: did the arsenals receive good quality materials? If the quality of the components of a ship depended heavily on the intrinsic nature of the materials taken from the procurement areas, the degree of freedom suppliers took with regard to the standards given by the maritime authorities was also highly important. Despite instating inspectors and sending engineer-manufacturers, master-mast makers, rope makers and sail makers to the procurement areas to appraise the work of the suppliers, these men could not follow all the stages of the supply process that had been delegated to the suppliers.

Observing the operational practices of contractor Dujardin de Ruzé's company during the 1770s contributed to feeding this new line of investigation. This company, with a monopoly over the Baltic naval store deals, did not manage to provide the French arsenals with high-quality goods. While the prices charged by the contractor were indisputably low in the face of increasingly strong European competition in this area, the translation of the Navy's requirements seems not to have been relayed sufficiently well. Quantities and sampling of trees caused great difficulty from 1774, since of the two million *livre tournois* of masts for which Dujardin was contracted, only 679,000 were delivered. In 1776, the arsenals no longer had enough trees to cope with new constructions, to the extent that, in Brest, the practice of carrying out only repairs on the oldest units to avoid drawing from stocks was considered. At the end of 1778, there were 1,239 masts in Brest barely a year in advance of a war. Overwhelmed by the situation, Dujardin only managed to keep his commitments for hemp and boards, which he gathered in many ports on the Baltic. Moreover, in addition to the quantity of masts, Dujardin's procurement strategy was damaged by his inability to deliver large trees, from 24 to 26 palms. Between 1775 and 1777, only two masts of 26 palms, two of 24 and one of 23 were delivered to France⁶⁴. Lastly, in addition to these difficulties, there was a recurring qualitative problem that the reports of the master-mast makers echoed, constantly disapproving of wood chosen for Dujardin from 1776 to 1783. However, the contractor was not directly responsible for purchases made on the Russian markets, insofar as he had delegated this task to foreign trade companies well-known on the squares of Riga and St Petersburg and accustomed to buying masts. Therefore, from Paris, via his intermediaries in Amsterdam, Dujardin detailed his list of requirements to the principal partner companies that relayed his orders. In Riga, the contractor depended on three commercial firms which endeavoured to get the required mast to him. It seems the Blankenhagen company dominated until 1775, before it was replaced by Wale, Pierson & Company and Collins & Company.

⁶³ Plouviez, *La Marine française*, 365-369.

⁶⁴ AN Mar. D/3/8 f°105 (mars 1778).

Today, we have few sources concerning the exchanges between the firm's management in Paris, the Navy and these commercial firms based directly in the procurement areas, in particular with regard to the communication of the qualitative requirements made by the Navy. From reading the commercial incidents of Dujardin de Ruzé and Co in the Baltic, we clearly encounter an unwillingness on the part of the contractor and a number of oversights regarding the purchase of wood. But the difficulty of finding high quality raw materials cannot come down to this alone, nor even to the substantial competition in the Baltic markets. The disparity between the requirements of the Navy and the intrinsic quality of wood available in Riga during the American War of Independence was very significant. In addition to the lack of sufficient time and funds to buy the best trees or to short-circuit the corruption which reigned on the Russian markets, the commercial firms appointed by Dujardin de Ruzé had difficulty commercially and technically translating the Navy's requirements, echoed by the contractor in 1776: *"I received the dispatch with which you honoured me the 5th of this month, by which you want to announce the representations made to you by Mr Dujardin de Ruzé about the impossibility of ensuring the number of the masts requested from Riga, because of the rigidity with which these masts are examined on their arrival here, and which was finally returned to you by Mr Barbé, on the need for being a little less difficult regarding the choice of this component which is becoming rarer and rarer."*⁶⁵

The case of Dujardin and Co is not limited to the 18th century, even though, from a global perspective, it is not always easy to precisely document the problems involved with the supply process. As for the 18th century, we have attempted to count and construct a typology of the disputes between the suppliers and the French Navy (quality of materials/lateness of payments by the Navy/interpretation of the contract clauses, fraud/transport problems). It appears that certain clauses in the signed contracts caused confusion and an increase in tension between the co-contracting parties⁶⁶. Even though the contracts were written so that all the terms were clearly defined, certain suppliers simply broke those terms unintentionally, following a poor interpretation of certain clauses in particular. This is the essence of the difficulties which emerged in connection with the supply of cast iron from the foundry of Guérigny belonging to Pierre Babaud de la Chaussade. It has already been emphasised that the Navy supported more modestly-scaled establishments in order to fulfil specific orders. In 1777, Guérigny lacked the responsiveness to provide all the small iron pieces specified in the scope statement necessary for naval shipbuilding. The intendant of Brest made this clear:

"Mr. de la Chaussade has made immense forging establishments and which deserve, for their utility to the Navy, the protection of the Government; that of Cosne for the Anchors is particularly valuable. He is unique in the Kingdom and the Anchors of Cosne are the best known anchors. But however substantial the establishments of Mr de la Chaussade are, they cannot suffice for all small iron pieces that one needs at the Port of Brest when there is a Construction service and a slightly high Repair. Mr. de la Chaussade cannot state the contrary, as experience has proved on many occasions."⁶⁷

⁶⁵ "J'ai reçu la dépêche dont vous m'avez honoré le 5 de ce mois par laquelle vous voulez bien me faire part de représentations qui vous ont été faites par le Sieur Dujardin de Ruzé au sujet de l'impossibilité de s'assurer du nombre des mâts demandés à Riga, à cause de la rigidité avec laquelle ces mâts sont examinés à leur arrivée ici, et du compte qui vous a été rendu par le Sieur Barbé, sur la nécessité d'être un peu moins difficile sur le choix de cette munition qui devient rare de plus en plus" AN Mar. B/3/627 f°51, Brest (12 July 1776).

⁶⁶ Plouviez, *La Marine française*, 150-152.

⁶⁷ "Le Sr. de la Chaussade a fait des établissements de forge immenses et qui méritent par leur utilité pour la Marine la protection du Gouvernement; celui de Cosne pour les Ancres est particulièrement précieux. Il est unique dans le Royaume et

A navy is a very complex military tool whose development led to particular relationships with the economic actors responsible for supplies. Even though maritime authorities produced many prescriptive documents to obtain reliable materials, it was still necessary to rely on a business network capable of interpreting this new knowledge and translating it from a commercial point of view, and therein lies a fascinating area for future research.

French researchers have now risen to the challenge of writing an economic and social history of the naval power, a major historiographic turning point which allows for a global approach to the construction of the fleet and naval ports. The obtained data are still partial but they testify to the dynamism of current research and will lead to many lines of investigation that will structure future work. The identification of the Navy's economic partners is the key to interpreting the failures and the successes of naval mobilization. It also allows us to unearth the relationship that the state cultivated with war.

The SIG of "maritime history" has indisputably allowed the French researchers working on these issues to come together, but it does not constitute a trend or a school, yet. However, the next stage must be at an international level as, remarkably, French research is little represented in the conferences and publications on naval warfare economy⁶⁸. The lack of precedence of French research on these issues is undoubtedly an explanation to a certain extent, but their development now requires comparison and confrontation with the data produced for other navies.

les Ancres de Cosne sont les meilleures Ancres connues. Mais quelque considerable que soient les établissements du Sieur de la Chaussade, ils ne peuvent suffire pour tous les petits fers dont l'on a besoin au Port de Brest lorsqu'il y a un service de Construction et un Radoub un peu vif. Que le Sr. de la Chaussade ne soutiennent par le contraire, l'experience l'a prouvé dans tous les tems" AN Mar. B/3/637 f° 33 (20 January 1777).

⁶⁸ For example, French research is little represented in the two works coordinated by Richard Harding, Sergio Solbes Ferri (*The Contractor State and its Implications, 1659-1815*, 2012) and Jeff Fynn-Paul (*War, Entrepreneurs and the State*, 2014). Two articles concerning supplying the army and the navy in the first volume (communication from Joël Felix and Pierrick Pourchasse) and a publication in the second volume by Guy Rowlands. We must, of course, include review papers where examples related to France are used.