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**Principal-Agent Problems in the French
Slave Trade: The Case of
Rochelais *Armateurs* and their
Agents, 1763-1792**

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Abstract

La Rochelle, the fourth largest slaving port in France in the eighteenth-century, is used as a case study in the application of agency theory to long-distance trade. This analysis explores an area not accounted for in the literature on French commercial practices. Being broadly couched in a New Institutional framework, this study explores the formal and informal institutions designed to curb agency problems, and emphasizes the ex-post strategies such as social rewarding, to which little attention is usually paid. It also finds reputation-effect strategies were efficiently combined with a well-operating legal system. It subsequently challenges the traditional dichotomy between societies where personal links dominated the economy and modern societies where business links are predominantly impersonal. As a result, this empirical analysis leads to a reappraisal of private ordering as opposed to legal centralism and calls for more theoretical research.

Introduction

Principal-agent problems emerge when the principal has to count on another party, the agent, to perform activities or services on his behalf.¹ When the principal is unable to verify the agent's actions or easily evaluate his performance, the agent has the opportunity to favour his own interest over that of the principal. Although asymmetries of information and of interests characterize all relations of exchange, they particularly concern long-distance trade. Agency problems make it necessary to design strategies that will provide incentives for the agent to conform to the principal's interest. A number of empirical studies have sought to examine the ways in which different societies engaged in long-distance

¹ See Milgrom & Roberts, *Economics, Organization and Management* (Prentice-Hall, 1992).

exchanges have sought to solve problems of agent opportunism through the institutionalisation of contractual relationships.² The study of business structures has traditionally established a dichotomy³ between pre-modern and modern practices: in pre-modern times, the solution to agency problems was to establish personal business networks based on ethnicity, kinship or religion, whereas the modern economic context is characterized by legal centralism and impersonal relationships. More recent approaches⁴ have theoretically and empirically challenged this dichotomy. While focusing exclusively on the relationship between a subordinate and his principal, this study aims at exploring the complexity of agency relations and moves beyond the traditional view, by examining how formal contract enforcement mechanisms operated simultaneously with informal ones based on private ordering.

La Rochelle's slave trade offered all the attributes of long-distance trade, and agency problems associated with it. The high degree of specialization of the city's business activities between 1763 and 1792 provides us with a case study representative of the French slave trade: although the size of La Rochelle's high seas fleet relative to that of other French ports gradually declined over the century, the city maintained its position as one of the four largest slaving ports in France.⁵ The erosion of Nantes' monopoly in the slave trade, the cession of Canada and

² See Greif, 'Reputation and Coalition in Medieval Trade: Evidence from the Maghribi traders', *Journal of Economic History* 49, 1989, pp. 857-882, and Lovejoy & Richardson, 'Pawns Will Live When Slaves is Apt to Dye': Credit, Slaving and Pawnship at Old Calabar in the Era of the Slave Trade', LSE Department of Economic History Discussion Paper No 38, 1997.

³ This discussion is broadly based on the Substantivist assumption, following the work of Polanyi.

⁴ See Hoffman, Postel-Vinay & Rosenthal, 'Information and Economic History: How the Credit Market in Old Regime Paris Forces Us to Rethink the Transition to Capitalism', *American Historical Review* 104, 1999, pp.69-94, and on credit markets, M. Granovetter, 'Economic Action and Social Structure: the Problem of Embeddedness', *American Journal of Sociology* 91, 1985, pp. 481-510.

⁵ P. Viles, 'The Slaving Interest in the Atlantic Ports, 1763-1792', *French Historical Studies* 7, 1972, p.530.

Louisiana after the Seven Years' War, and the introduction of the bounty system,⁶ encouraged Rochelais *armateurs* to refocus their activities on the opportunities offered by a trade already familiar to them.⁷

Destinations in Africa included Senegal, Guinea, and Angola. Most vessels were then sent to Saint-Domingue: by 1780, three-quarters of the colonial trade was carried out with Saint-Domingue,⁸ which was the largest provider of unrefined sugar and indigo. The Revolution in Saint-Domingue in 1791 marked the end of La Rochelle's slave trade, with the last slaving ship departing in 1792, and thereafter La Rochelle declined as a major port.

This dissertation examines the relevance of the principal-agent theory in this specific context, for, as pointed out by K. Arrow, there is often a strong divergence between principal-agent relationships in reality and economic theories used to analyse them.⁹ He advocated that more research be done on the greater diversity of rewards used in the real world, and particularly social rewards that cannot be easily pinned down by a model of explicit contractual relationships. This dissertation uncovers the different institutional ways in which Rochelais *armateurs* provided their captains and agents with incentives in a search for efficiency.

It is based on the consultation of archives kept in La Rochelle, the Archives of the Médiathèque and the Archives Départementales of Charente-Maritime, containing personal correspondences and papers of

⁶ O. Pétré-Grenouilleau, *Les négocees maritimes français, XVII-XX e siècles* (Belin SUP, 1997), p. 120. Introduced in 1784 in order to revitalize the trade, the bounty system consisted of state subsidies paid in function of ton burden and could amount to more than one-quarter of the initial investment.

⁷ The slave trade on which this study focuses represented 60% of all ventures to the West Indies, direct ventures accounting for the rest. See O. Pétré-Grenouilleau (1997) p. 120.

⁸ P. Butel, *The Atlantic* (London and New York, 1999), p. 153.

⁹ Arrow, "The Economics of Agency", in *Principals and Agents: The Structure of Business*, ed. by J. Pratt & R. Zeckhauser, 1985, pp. 37-51, Pratt & Zeckhauser (eds.), 'Principals and Agents: An Overview', in *Principals and Agents: The Structure of Business* (Harvard, 1985), p.16.

armateur families, the Admiralty registers, and legal manuscripts. All passages from the original eighteenth-century French have been translated. Although my research attempts to give an overview of business practices in La Rochelle, some names will be over-represented because of the nature of the documents available and because time and word limit constraints have led me to concentrate on the most enlightening sources. For this study, twenty-four leading families, responsible for most ventures over the period have been selected.¹⁰ For the same reasons, (and acknowledging the fact that most *armateurs* engaged in other activities than slaving, from insuring and banking to sugar refining, and that some of them acted as agents for non-local firms), this approach focuses on the relationship developed between these men acting as principals and their agents at sea and in the colonies. The term *armateur* has been left in French, because it defines more appropriately the type of Rochelais merchants who engaged in slave trade: as owners of ships and of part of their cargoes. They may not have been absolute owners and often acted as managers of ventures in which they held shares alongside other investors. Captains were not only responsible as commanders of ships, but also for carrying out trade on the African Coast. Agents or *commissionnaires* were in charge of the sale of the cargo on reception of a ship in the colonies and worked as intermediaries between slavers and the planters.

My discussion of agency problems in La Rochelle is divided into six sections: the first chapter reviews the theoretical background, the second the specificities of the slave trade and the way these affected agency structures, the third and the fourth examine the informal and formal institutions that regulated employment and contractual relationships, the fifth explores the aspects of agency relationships not taken into account

¹⁰ Inferred from Garnault, *Le commerce rochelais au XVIIIe siècle: « Marine et Colonies de 1763 à 1790 »* (La Rochelle, 1900), Vol. 5, pp. 373-375.

by the analytic model, and the last section discusses the relative efficiency of agency structures.

1. Literature Review

1.1 Agency theory

Agency problems arise in the absence of perfect competition, perfect contracting and costless information, and their persistence has led to a reappraisal of neoclassical theories and rational choice approaches. Bounded rationality in economic organizations and in contractual relationship results from unforeseen events, imperfect information enforcement costs, and inaccuracies.¹¹ This dissertation examines post-contractual (agent opportunism and moral hazard) and pre-contractual (adverse selection) opportunism deriving from asymmetric information. Adverse selection occurs when private information, for instance about competences and productivity, is held by just one party before signing the contract and can obstruct a value-maximizing agreement. Moral hazard and agent opportunism derives from the fact that the agent's and the principal's interests are not aligned and from the behavioural assumption that the agent is inclined to pursue his self-interest, cheat and shirk. In situations of asymmetric information,¹² the principal and the agent possess different types of information, the principal cannot verify the agent's behaviour so that "when those with critical information have interests different from those of the decision maker, they may fail to report completely and accurately the information needed to make good decisions."¹³ This is especially true for long-distance trade, because high transportation costs and high communication costs make it impossible for

¹¹ For a general discussion of agency theory, see Milgrom & Roberts (1992), and McMillan, *Games, Strategies and Managers* (Oxford, 1992).

¹² Arrow (1985) pp. 37-51.

¹³ Milgrom & Roberts (1992) p. 168.

the principal to monitor his agent's behaviour and ensure his actions are not guided by self-interest only. The monitoring of employee shirking is made more difficult because of uncertainty and externalities: thus, outcomes cannot directly be linked to the agent's behaviour and level of effort.¹⁴

The need for governance arises because in a model derived from the Prisoner's Dilemma, people are better off when they cooperate than when they don't.¹⁵ The New Institutional Economics (NIE) interprets institutions as an answer to the costs of exchange and problems of coordination and cooperation, for "the major role of institutions in a society is to reduce uncertainty by establishing a stable (but not necessarily efficient) structure to interaction."¹⁶ It places transaction costs¹⁷ and the problem of contracting at the core of economic organization.¹⁸ Institutions are defined as rules, embodied in informal constraints understood as social and cultural norms, and formal constraints such as contracts and laws, based on legal and political systems.¹⁹

Although the NIE allows for social and cultural norms to be taken into account, it favours state institutions and contract law and underestimates the potential of social arrangements. Solutions to agency problems in the absence of a formal legal framework are often to be found in dense social relations: "a moral community", repeated interaction and multilateral enforcement mechanisms ensure that the dishonest

¹⁴ McMillan (1992), p. 98.

¹⁵ W. Kasper & M. Streit, *Institutional Economics: Social Order and Public Policy* (Edward Elgar, 1998), p. 94.

¹⁶ D. North, *Institutions, Institutional Change and Economic Performance* (Cambridge, 1990), p. 6.

¹⁷ For the purpose of this study, transaction costs are defined as the association of information costs (the costs of negotiating and enforcing a contract) and compliance costs.

¹⁸ O. Williamson, *The Economic Institutions of Capitalism: Firms, Markets, Relational Contracting* (The Free Press, 1985), p.20.

¹⁹ *Ibid*, p. 25-37.

agent will be discovered.²⁰ This leads Greif to criticize the NIE theory and develop a new framework, the Historical Institutional Analysis (HIA), which because of its wider acceptance of what is meant by institutions²¹ can examine informal enforcement mechanisms through micro-level historical and context-specific studies.²² As a legal framework develops in a society, it has been argued that “the function of the homogenous trading group as a low costs arrangement for contract enforcement may become increasingly redundant (...)” and that “consequently, the particularistic exchange networks based on mutual trust will gradually be replaced by impersonal exchange based on contract”.²³ Greif adds that legal enforcement mechanisms are obsolete in societies where collective, or multilateral, enforcement mechanisms operate and their emergence is subsequently impeded.²⁴ The case of La Rochelle however does not fit this classification: informal institutions based on multilateral enforcement mechanisms coexisted with a well-established legal system. In line with NIE theory, this discussion places the study of institutional devices as a response to agency problems at its centre, and relies on a HIA framework, for direct historical evidence to show the complexity of

²⁰ Greif (1989) pp. 857-82, Greif, ‘Contracting, Enforcement and Efficiency: Economics Beyond the Law’, *Annual World Bank Conference on Development Economics*, 1996, pp. 239-265.

²¹ Institutions are defined by Greif as “social factors – such as rules, beliefs, norms and organizations, that guide, enable, and constrain the actions of individuals,” quoted by Dixit, *Lawlessness and Economics: Alternative Modes of Governance* (Princeton, 2004), p. 6.

²² A. Greif, ‘Historical and Comparative Institutional Analysis’, *American Economic History* 88, 1998, p. 80. For a further discussion of the HIA, Greif, ‘Microtheory and recent developments in the study of economics and institutions through economic history’, in *Advances in economics and econometrics: theory and applications*, eds. D. Kreps & K. Wallis (Cambridge, 1997), pp. 79-113.

²³ Landa, *Trust, Ethnicity and Identity: Beyond the New Institutional Economics of Ethnic Trading Networks, Contract Law, and Gift-Exchange* (Michigan, 1994), pp. 112-113.

²⁴ See Greif, ‘Cultural Beliefs and the Organization of Society: A Historical and Theoretical Reflection on Collectivist and Individualist Societies’, *The Journal of Political Economy* 102, pp. 912-950, Greif (1997) p.102, and Platteau, *Institutions, Social Norms and Economic Development* (Harwood, 2000), p. 258.

contract enforcement mechanisms. It rejects the evolutionary perspective, and offers to analyse the simultaneous presence of two modes of contract enforcement, “self-governance, based on community information networks” and collective sanctioning, and “formal state governance, based on a framework of laws.”²⁵

1.2 Agency problems in the historical literature

A good example of the application of agency problems theory is provided by Carlos,²⁶ who did extensive work on agency problems in early-chartered companies and managerial firms. She compared the technologies used by two chartered companies involved in long-distance maritime trade, the Hudson’s Bay Company and the Royal African Company, in order to solve agency problems of trust, moral hazard and adverse selection. The analysis of the case of the Royal African Company allowed her to understand the conditions that prevailed in the slave trade. But, the differences between a vertically integrated firm such as the Royal African Company and business structures in La Rochelle remain important, and in the former case, the contract structure designed to curb managerial opportunism differed from that used by Rochelais *armateurs*. The example of the Hudson’s Bay Company²⁷ is also useful in showing that in addition to formal contract mechanisms, other strategies involved encouraging trust among agents by developing a sense of community among them.

²⁵ Dixit (2004) p. 97. This dichotomy is similar to the distinction between formal and informal contract enforcement mechanisms.

²⁶ A. M. Carlos, ‘Principal-Agent Problems in Early Trading Companies: A Tale of Two Firms’, *The American Economic Review* 82, 1992, pp. 140-145, and A. M. Carlos, ‘Bonding and the Agency problem: Evidence from the Royal African Company, 1672-1691’, *Explorations in Economic History* 31, 1994, pp. 313-335.

²⁷ Carlos & Nicholas, ‘Agency Problems in Early Chartered Companies: The Case of the Hudson’s Bay Company’, *The Journal of Economic History* 50, 1990, pp. 853-875.

Greif²⁸ has concentrated on two types of enforcement mechanisms, bilateral and multilateral reputation mechanisms, used respectively by the Genoese merchants and the Maghribi traders, and shows the importance of cultural, political and social environment in shaping governance institutions. This study is based on his model, but nonetheless challenges his claim that reputation-based strategies prevent the development of third party enforcement.

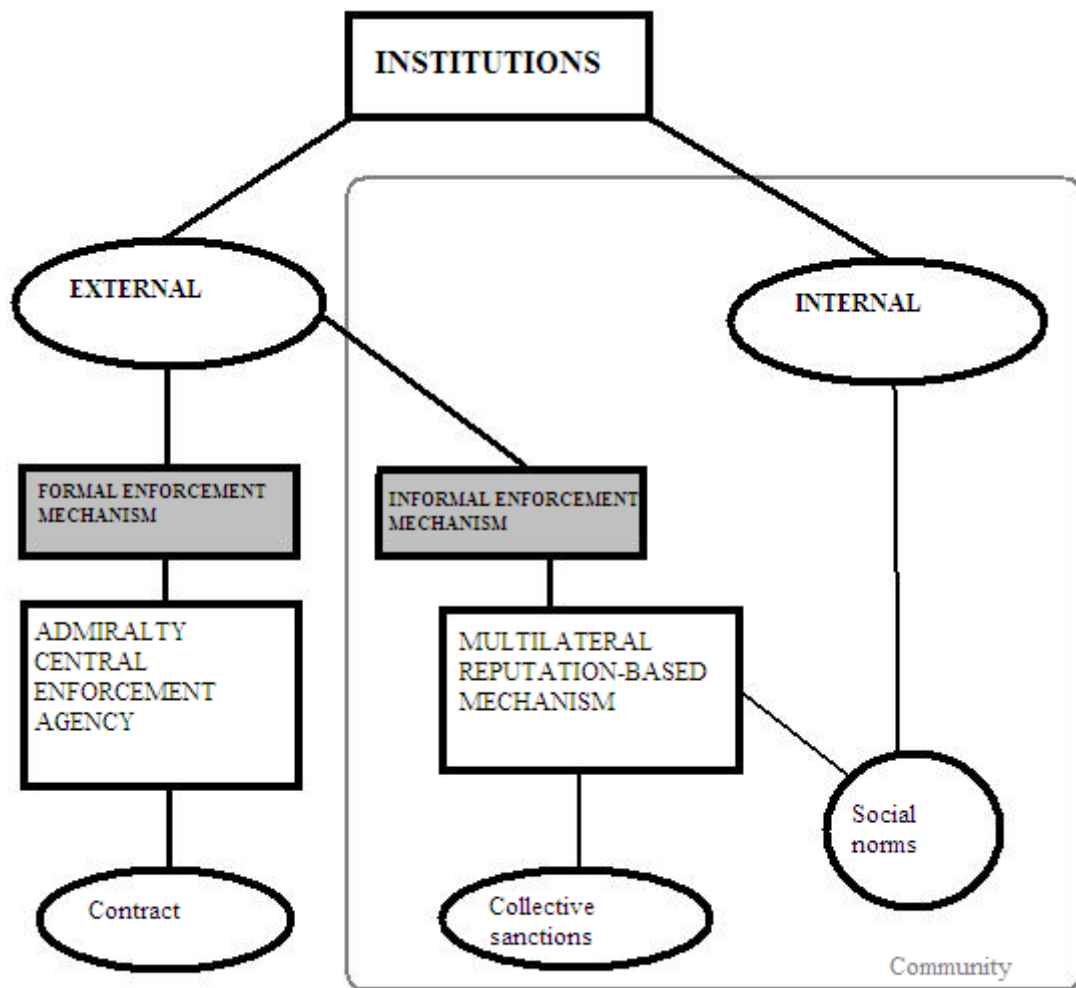
1.3 Agency problems in the case of La Rochelle

Carlos²⁹ regrets that very little work has so far been done on agent opportunism and incentives structures in the West Indies. The literature on agency problems in the French Atlantic slave trade is practically non-existent, because of assumptions that family-based business structures in eighteenth-century France did not generate agency problems. Chartered companies in France did not play a great role in the Atlantic trade, so that A. Smith's early judgment that the managerial structure of the companies led to "negligence, profusion and malversion of their own servants" did not seem to apply to the French case³⁰. By contrast, this study develops a full analysis of the informal enforcement mechanisms and formal institutions, which operated simultaneously in La Rochelle (see 1).

²⁸ See Greif (1997), Greif (1998).

²⁹ A. M. Carlos (1994) p. 315.

³⁰ A. Smith, quoted by Carlos (1992) p. 140.



1. Institutional responses to principal-agent problems in La Rochelle, 1763-1792.

2. Specificities of the slave trade

Slave activities entailed geographically extensive trade networks, high entry costs, specific commercial and technological skills, and high potential earnings. Although these things are characteristic of long-

distance trade in general,³¹ they were accentuated by the nature of the slave trade.

2.1 Asymmetric information

In long-distance oceanic trade, captains and agents had an informational advantage over their principals,³² through their exclusive knowledge of first, the permanent characteristics of local markets and colonies, and second fluctuating trade conditions. *Armateurs* were often dependent on their captain in order to gather information on the colonies. For example, when Van Hoogwerff acquired a plantation in Guyana, he repeatedly asked his correspondent Robert about cultivation techniques and the numbers of slaves needed, and admitted his ignorance: “our ship captains that know your colony insist that Negroes there are ill-disciplined and work at most 3 or 4 days a week, and the rest of the time for themselves. I have to say that I can’t believe it (...). It is very different at Saint-Domingue and other colonies, where they work until the last minute.”³³ His knowledge of Saint-Domingue was also derived from his captains: “I talked today to one of our captains, who knows Martinique and Saint-Domingue perfectly well, and who insisted that there was nowhere on these two islands called St Etienne.”³⁴ Much decision-making had to be left to the discretion of employees abroad. Captains, whose primary function was that of a maritime officer, had also to carry out trade and therefore played a very diversified role, from fitting out the ship in France and hiring the crew, to selling slaves and buying the return cargo. In some cases, captains remained on the islands after the departure of

³¹ O. Pétré-Grenouilleau, ‘Long-distance trade and economic development in Europe and Black Africa (Mid-fifteenth to Nineteenth century): some pointers for further comparative studies’, *African Economic History* 29, 2001, p. 165.

³² This has been analysed for the British Navy by Allen, ‘The British Navy Rules: Monitoring and Incompatible Incentives in the Age of Fighting Sail’, *Explorations in Economic History* 29, 2002, pp. 204-231.

³³ A.C.M., 4J 2847, letter of 07th April 1772.

³⁴ A.C.M., 4J 2847, letter of 26th October 1771.

their ship in order to collect debts from plantation owners in the colonies. Colonial agents' duties, when not performed by the captain, included sending back vessels, dispatching the financial returns and collecting debts.³⁵

2.2 High profits?

Controversy is high as to the profits generated by the slave trade, and here is not the place to discuss it. What is important is the perception that participants had at the time, which may have affected their behaviour. First, the notion that this trade can generate very high profits either for the *armateur* or the captain / agent prevailed, as expressed by Proa:³⁶ “we exchange these goods for blacks, a Negro in Africa costs about 3 or 4 hundred livres, and is sold in America for 15 to 18 hundred livres, which is a large profit. These are very lucrative ventures, from which the captain alone often earns 30,000 livres.” Long-distance trade certainly could generate very high profits because of arbitrage and because the costs of high investment declined as distances increased,³⁷ but the prospect of high profits was often offset by the high risks taken. As for agents, it is often believed that their trade was the less risky, since they received commissions on nearly all transactions while at the same time they did not risk their own capital, unless they invested in metropolitan shipping. This led Garesché to write: “expeditions for the slave trade only make victims now (...). Captains, agents are the only ones to benefit from it, and the *armateur* is forced to bear loss or grow old waiting for profits”.³⁸ Savings could eventually allow agents and captains to return to France and set themselves up as *armateurs*.

³⁵ P. Butel, *Les Négociants bordelais, l'Europe et les Iles au XVIIIe siècle* (Paris, 1974), pp. 234-238.

³⁶ A.C.M., 4J 2318.

³⁷ F. Braudel, *Civilisation matérielle, Economie et Capitalisme, XVe-XVIIIe Siècle*, Vol. 2 (Paris, 1979), pp. 355-358.

³⁸ A.C.M., 4J 1610, letter of 15th July 1780.

2.3 High risks

First, slave expeditions were very risky because of the distance involved and conditions at sea. Shipwrecks were not uncommon and the proportion of irretrievable ships during the period concerned was about 8.5%,³⁹ compared with around 1.5% for direct ventures.⁴⁰ Second, war captures, especially by the British, also represented a credible threat, as shown by the fate of Guibert's *Nancy*⁴¹, Van Hoogwerff's *Betsy*⁴² or Carayon's *Duc de Laval*.⁴³ These results mean that between 11% and 12% of the ventures resulted in the loss of a vessel, before or after disembarkation of slaves.⁴⁴ Third, although rarely successful, slave revolts were not unknown. At least seven insurrections have been recorded during the period concerned, including the ones on Goguet's *Intelligence*, Seignette's *Jeune Louis*⁴⁵ and on the *Bonne-Société*, which resulted in the death of 12 slaves.⁴⁶ Thus, slave expeditions demanded larger and better-armed crews, more supplies and equipment and necessitated heavy initial investment. The average *mise-hors*, that is the physical preparation of the ship for departure combined with the cost of the cargo,⁴⁷ amounted to between 200,000 and 300,000 livres⁴⁸, which is substantial considering that Rochelais *armateurs*' estates by the 1780's ranged from 250,000 to one million livres for the six or seven wealthiest

³⁹ Inferred from J.Mettas, *Répertoire des expéditions négrières françaises au XVIIIe siècle*, «Ports autres que Nantes » (Paris, 1984), and 'The Trans-Atlantic Slave Trade : A Database on CD-ROM', eds. D. Eltis, S. Behrendt, D. Richardson, and H. Klein (Cambridge, 1999).

⁴⁰ These figures have been extrapolated from the ones used for Nantes, given that the same maritime conditions prevailed for both ports. See J. Meyer, *L'armement nantais dans la deuxième moitié du XVIIIe siècle* (Paris, 1999), p. 8.

⁴¹ A.C.M., 4J 1610, letter of 22nd May 1780.

⁴² A.C.M., 4J 2847, letter of 17th October 1778.

⁴³ A.C.M., 4J 2318.

⁴⁴ Inferred from Mettas (1984), and Eltis, Behrendt, Richardson & Klein (1999).

⁴⁵ A.C.M., B 5769.

⁴⁶ A.M.L.R., Ms. 2290, letter of 20th April 1784.

⁴⁷ These were the cost of buying or chartering the vessel, expenditure for sails, cables and repairs, trading goods, provisions, wages of crew, etc.

⁴⁸ Jean-Michel Deveau, *La France au temps des négriers* (Paris, 1994), p.47.

families.⁴⁹ These heavy investments were risky because planters lived on long credit. It took merchants several years to recover their initial capital and the profits made, so that several voyages were needed to realise the product of colonial sales.⁵⁰ Lastly, long sea voyages (usually between 12 and 15 months), meant that captains were dependent on the numbers of slaves available for trade in the trading posts on the African Coast which fluctuated according to wars, diseases and European and Arab competition.⁵¹ *Commissionnaires* similarly competed with other potential sellers in the colonies. Undersupplied and oversupplied markets were a major reason for poor sales or inadequate returns.

2.4 Crew mortality and living conditions

Death was omnipresent in slaving expeditions because of problems of sanitation, the scarcity of food and clean water. Although mortality rates differed significantly from one venture to the other, it is estimated that mortality among the crew, which was around 13 to 14%,⁵² was nearly as high as mortality among slaves and was higher than on non-slaving ships.⁵³ Proa believed that the “slave trade (...) was the field where one could be the most promptly promoted and the most profitable, but this navigation was hard and the officer had to work harder than the sailor”.⁵⁴ The workload was important, especially for officers, who had to supervise the trade, carry the goods to the coast, and then receive the slaves on board, while always ensuring security. Climate was a major cause of disease among the crew: “even the water we drink is very bad and needs to be filtered in clay vases before we can drink it. Waters in the Guinea

⁴⁹ J. Clark, *La Rochelle and the Atlantic Economy during the Eighteenth-Century* (Baltimore, 1981), p. 220.

⁵⁰ J-M Deveau (1994) p. 81.

⁵¹ Ann. M. Carlos (1994) p. 317.

⁵² Jean Meyer, (1999) p.9.

⁵³ Robert , *Les trafics coloniaux du port de La Rochelle au XVIIIe siècle* (Poitiers, 1960), p.79.

⁵⁴ A.C.M., 4J 2318.

Coast are the cause of extremely dangerous diseases, such as fevers, obstructions, dysentery, and so forth, so that some ships have returned to France with more than half of their crew dead, officers as well as seamen (...). O! Fatal greed! Thirst for gold!"⁵⁵ The high uncertainty of this trade leads us to assume that agents were particularly risk-averse. Reneging and desertions were not uncommon, although rarely among officers.

3. The solutions I: social embeddedness⁵⁶

3.1. Kinship

Kinship ties provide an immediate context to build trust, because they allow the agent's and the principal's interests to be perfectly aligned.⁵⁷ These devices, based on non-market sanctions such as family disapprobation require low monitoring and enforcement costs. Besides, kinship characteristics are non-price market signals that indicate the potential honesty of a trading partner and are used as a low-cost screening device. Most studies agree to say that business firms and structures were family-based in La Rochelle⁵⁸. Fathers, sons and brothers established partnerships together. Most of the leading families had marital connections, and although this practice had declined by the 1760's, relatives by marriage could provide a reliable group of co-investors.⁵⁹

The practice of hiring relatives as ship officers does not seem however to have been well established in the late eighteenth-century, although some families, including the Giraudeau and Garesché, trained as shipmasters. As for agents, most kinship links were established through the settlement of a son or a brother in the colonies. There was

⁵⁵ A.C.M., 4J 2318.

⁵⁶ The notion that economic activity is rooted in social interaction and interpersonal network is developed by M. Granovetter (1985) pp. 481-510.

⁵⁷ J. Coleman, *Foundations of Social Theory* (Harvard, 1990), p. 157.

⁵⁸ J. Clark (1981) pp. 67-87, Deveau (1994) pp. 71-73.

⁵⁹ Clark (1981) p. 74-77.

also a strong incentive to establish kin relations with potential business partners.⁶⁰ Guymet married into the Poupet family in Saint-Domingue before becoming an associate, and his daughter in turn married her uncle, Michel Poupet in La Rochelle.⁶¹ As shown by table 2, about half of the *armateurs* had relatives in the colonies, and 29.17% had kin-related correspondents to which they addressed their ventures. The establishment headed by Pierre Garesché, Garesché & Billoteau, managed the affairs of Jacques Guibert, whose brother had married Pierre Garesché's sister, and of Jacques Carayon fils aîné, whose sister was the wife of Daniel Garesché.⁶² Daniel Garesché's instructions to his captain, Van Alstein, highlight the trust placed in kin-related agents: "MM. Garesché brothers' advices will induce your decision. They will never deceive you. I would like to see you in their hands in preference to any others'. My interests require it and I hope that circumstances as well as MM. Gareschés' advice will persuade you to stay with them. This will fulfil my wishes and my goal in your venture."⁶³ Family loyalty, although significant, did not govern all agency relations. The ultimate port of return could significantly differ from the intended port of return, which means that in many circumstances, ships were referred to agents other than relatives. Van Hoogwerff was in contact with ten firms from Saint-Domingue: four from Port-au-Prince, three from Le Cap, two from Saint-Marc, and one from Cap Tiburon.⁶⁴ However, there is evidence that *armateurs* used the network of families with whom they were intermarried in places where none of their relatives lived.

⁶⁰ Platteau (2000) p. 254.

⁶¹ D. Miet, 'Evolution économique et sociale d'une famille rochelaise: la famille Poupet au XVIIIe siècle', unpublished Maîtrise thesis, Université de Poitiers, 1982), pp. 102-105, A.C.M., 4J 884.

⁶² A.C.M., 4J 1610.

⁶³ D. Rinchon, *Pierre-Ignace Liévain Van Alstein, Capitaine négrier (Gand 1733-Nantes 1793)* (Ifan-Dakar, 1964), p. 297.

⁶⁴ A.M.L.R., Ms. 1949.

2. Kinship connections between leading *armateurs* and colonial firms

Rochelais families	Kin-owned plantation	Kin-centred colonial firm
Admyrault		
Belin	X	
Carayon	?	
Charuyer		X
De Beaussay		
De Jarnac		
De Richemond	X	
Dumoustier de Frédilly	X	
Dumoutier		
Fleuriu	X	
Garesché	X	X
Giraudeau		
Goguet	X	
Guibert	?	X
Nairac	?	X
Perry		
Poupet	X	X
Rasteau	X	X
Seignette	X	X
Suidre		
Thouron		
Van Hoogwerff		
Vivier		
Weiss		

Sources: A.C.M., 4J 2847-2848, A.C.M., 4J 1610, A.C.M., 4J 884, Clark (1981), p.135

3.2 Religion

The great majority of leading families of *armateurs* involved in the slave trade were Protestants. Out of the 24 leading firms, 21 were Protestants, that is 87.5% (see table 3), at a time when Protestants represented only about 10% of the population of the city. It has been argued that religion plays a significant role as a low-cost screening device and that trust, as by-product of moral and religious norms, contributes to

lowering monitoring costs.⁶⁵ First, there is no evidence that *armateurs* preferably employed captains of the same confession. Second, although it has been argued that cooperation between Protestants and Catholics was limited,⁶⁶ religion never interfered with potential business collaboration, and never represented a screening device in the choice of future partners. Although Catholics, the Poupet brothers in Le Cap did business with Van Hoogwerff, Dumoutier, Carayon and Vivier, « because they have a great reputation. »⁶⁷ Marriage represented another economic strategy, and this superseded religion: Jacques Guibert, a Catholic, was a relative of Pierre Garesché in Le Cap, since his brother Pierre Jean had married Pierre Garesché's sister.⁶⁸ Business relations were established according to merit as much as to religion and social criteria.

⁶⁵ J-P Platteau (2000) p. 302.

⁶⁶ Robert (1960) and Laveau, *Le monde rochelais des Bourbons à Bonaparte* (La Rochelle, 1988) argue that insurances were only one of the rare sectors in which Catholics and Protestants collaborated.

⁶⁷ A.C.M., 4J 2847, letter of 11th September 1774.

⁶⁸ A.C.M., 4J 1610.

3. Religion of the leading Rochelais Families

Rochelais families	Protestants	Catholics
Admyrault	X	
Belin	X	
Carayon	X	
Charuyer	X	
De Beaussay	X	
De Jarnac	X	
De Richemond	X	
Dumoustier de Frédilly	X	
Dumoutier	X	
Fleuriau	X	
Garesché	X	
Giraudeau	X	
Goguet		X
Guibert		X
Nairac	X	
Perry	X	
Poupet		X
Rasteau	X	
Seignette	X	
Suidre	X	
Thouron	X	
Van Hoogwerff	X	
Vivier	X	
Weiss	X	

Sources: A.C.M., llc 3424 / 25, Garnault (1900).

3.3 Reputation

Reputational enforcement mechanisms are based on the notion that the value of reputation and the long-term gains to be expected from future business will exceed the gains of cheating. Using game theory, reputational mechanisms are based on the anticipation of future interactions, which makes the development of cooperation possible.⁶⁹ Multilateral punishment based on “social sanctioning power of the

⁶⁹ R. Axelrod, *The Evolution of Cooperation* (Basic Books, 1984), p. 173.

community”⁷⁰ can enforce an agreement even when the relation between principal and agent does not last. Information transmission networks that allowed this system to work were highly developed in La Rochelle. Reputation worked as a screening device.⁷¹ Gossip played a crucial role in the recruitment of captains and the selection of agents. These local networks explain why captains of local origins dominated the trade. Out of the 51 successful candidates at the Admiralty between 1779 and 1789, 38, that is, 74.5%, originated from La Rochelle.⁷² However, information networks extended to other slaving ports, through extensive correspondence and regular visits.⁷³ J-B Nairac kept close ties with his brothers, *armateurs* in Bordeaux, whom he visited regularly there.⁷⁴ Kinship networks facilitated the exchange of non-price information. It was through his friendship with Rasteau that Proa was offered the sub-lieutenancy on the *Duc-de-Laval*, whose *armateur*, Carayon was related to the Rasteau and Admyrault families.⁷⁵ This system of networking and communication, seeking matches between agents and principals, made the employment market at once personal and impersonal.⁷⁶ In 1773, Garesché, in search of an experienced captain, learnt of Van Alstein through his correspondents in Nantes, the Montaudouin brothers. Ten years later, he in turn recommended Van Alstein to the Nairac in Bordeaux.⁷⁷

Reputation, the accumulation of information and repeated games favour personalized trust between parties. Long-term relationships often

⁷⁰ Greif (1996) p.243.

⁷¹ Milgrom & Roberts (1992) pp. 156-157.

⁷² A.C.M., B. 5978-5981.

⁷³ See Banks, *Chasing Empire across the Sea: Communications and the State in the French Atlantic, 1713-1763* (McGill, 2002), who develops the notion of an Atlantic merchant network.

⁷⁴ A.C.M., 4J 2847, letter of 29th December 1772.

⁷⁵ A.C.M., 4J 2318.

⁷⁶ See Hoffman et al. (1999) for a similar analysis of the credit market in Old Regime Paris.

⁷⁷ Rinchon (1964) p.296, p.335.

existed between captains and their *armateurs*, as expressed by Paul Hardy, who served Garesché more than ten times, after a disagreement with his armateur:⁷⁸ “I rely on Garesché in the same way he must rely on me. He found his match in me; he could perhaps not easily find a substitute, which is how I think of myself. However that may be, I am very obliged to him for returning to me. I never stopped being attached to him. Our break-up and our reconciliation resemble a married couple who, at first united, fall out, quarrel, is driven apart because the wicked sow discord, and makes it up, since, despite their annoyances and their dissatisfaction, spouses have judged, respected and esteemed each other.” However, pre-commitment, made cheating more costly, and determined whether trust developed.⁷⁹ This can be achieved through the development of personal bonds⁸⁰ or through contracting.

4. The solution II: legal system and the designing of contracts

4.1 The Admiralty

The Admiralty⁸¹ was a jurisdictional and administrative state institution, which addressed offences and disagreements occurring at sea or on the French coasts, (except those concerning the Royal Navy), the execution of shipping terms, maritime contracts and insurance. This court was created in February 1631 by Louis XIII in La Rochelle, and its working was regulated by an edict from 1681.⁸² *Armateurs* had to declare each venture to the Admiralty, and were liable for the captain’s actions as

⁷⁸ A.C.M, B 6055.

⁷⁹ D. Gambetta (ed.), ‘Can We Trust Trust?’, in *Trust: Making and Breaking Cooperative Behaviour* (Blackwell, 1988), p. 221.

⁸⁰ A.C.M., 4J 2318. *Armateurs* often met the officers before the venture.

⁸¹ Laveau (1988) p. 63.

⁸² Valin, *Nouveau commentaire sur l’ordonnance de la Marine du mois d’août 1681* (La Rochelle, 1760).

far as the vessel and the cargo were concerned.⁸³ The contractual agreement between *armateurs* and crewmembers had to be drafted in writing and include terms and conditions,⁸⁴ so as to ensure strong commitment. The Admiralty represented a credible third-party enforcing agency, because of its information-pooling mechanism. Information was centralized and circulated between the different Admiralties. Saint-Domingue and Martinique each had an Admiralty.

4.2 Post-contractual opportunism

As noted by Carlos,⁸⁵ “the incentive structure needed to be one that would induce the optimal level of effort and at the same time reduce the ability of managers to hide information from the firm”. Two types of contract⁸⁶ can be offered to an agent to keep him honest: in one, compensation is a variable of “observed productivity” whereas in the other, it is a variable of “the results of monitoring for evidence of malfeasance” and is often characterized by bonding. The first type operated in La Rochelle. In theory, the principal could evaluate the agent’s level of effort, according to the agent’s marginal product. However, productivity is also affected by external factors that escape an agent’s control.⁸⁷ This, and the fact that the agent may be risk averse, explains why the pay could be linked closely to levels of productivity, and is in most cases based on a basic salary.

⁸³ *Ibid.*, LIV. II, Tit.VIII, Article II.

⁸⁴ *Ibid.*, LIV. III, Tit. IV, Article I.

⁸⁵ Carlos (1992) p. 141.

⁸⁶ See Curtis Eaton & White, ‘Agent Compensation and the Limit of Bonding’, *Economic Inquiry* 20, 1982, pp. 330-331.

⁸⁷ Pratt & Zeckhauser (1985) p. 8.

4.2.1 Efficiency wages and commissions

The “Principal’s Ideal Payment Scheme”⁸⁸ is one in which the agent’s marginal payment rate is equivalent to no marginal product. In this arrangement, the agent’s and the principal’s interests are perfectly aligned. However, the agent being risk-averse and not in control of output fluctuations, an efficient contract will combine a fixed basic salary with a commission rate that acts as performance incentive. Carlos⁸⁹ argues that piece rates were not efficient in the slave trade because of the uncertainty of supplies, but Rochelais *armateurs* adopted a type of contract that associated a certain level of risk for the agent via commissions with regular wages. Commissions for captain and officers, by tying the pay to output and productivity served to align the agents’ interests with that of the *armateur*. Because of the lesser risks involved and because they had the opportunity to diversify their activities by acting as agents for several merchants, the salary of colonial agents was exclusively based on commissions, usually between 2% and 5% of the slave sale: the Mesnier brothers received a 3% commission on the slave sale of the *Duc-de-Laval*,⁹⁰ Coiron only 2.5% on that of the *Bonne-Société*.⁹¹

As for captains, their monthly wages usually amounted to 150 to 200 livres. Second captains usually received between 100 and 150 livres, a lieutenant around 70 livres and a second lieutenant 60. These wages were in general five to seven times that of ordinary sailors.⁹² Captains also received commissions of 5% to 7% on the slave sales they completed.⁹³ Alongside with other officers, they were sometimes granted a slave from the cargo and bonuses (see 4). In 1773, Van Alstein,

⁸⁸ McMillan (1992) p.102.

⁸⁹ Carlos (1992) p. 317.

⁹⁰ Rinchon (1964) p. 319.

⁹¹ A.M.L.R., Ms. 2289, letter of 2nd August 1784.

⁹² Robert (1960) p.70.

⁹³ J. Price, ‘Credit in the slave trade and plantation economies’, in *Slavery and the Rise of the Atlantic System*, ed. Solow (Cambridge, 1991) p. 334.

besides his monthly salary of 150 livres, received a 5% commission on the slave sale, a slave and a bonus proportional to the first returns that ranged from 1,000 to 4,000 livres.⁹⁴ Commissions represented the bulk of a captain's revenues: Van Alstein received 2,281.10 livres, a bonus of 1,000 livres, and a commission of 30,199 livres. The rationale behind it, that is the better treatment of slaves whose death represented a loss of assets, is highlighted by Proa:⁹⁵ "The *armateurs'* policy means that the captain's and officers' salaries are not high, but in compensation they receive 12, 10 or 6 livres more or less per slave sold in Saint Domingue. This way, the crew has an interest in the care and the preservation of these Negroes, since the better we treat them, the more of them arrive safe and sound in America, the more money we receive."

These salaries were high and created an incentive for the agent to stay honest, because of the potential threat of termination of a lucrative contract. Although they certainly included a risk premium, salaries also incorporated some non-compensating differential, which increased the cost of losing a job, and can be defined as "efficiency wages". In this model, "the firm pays the worker a premium above the market rate which represents one method of ensuring compliance, although such a premium is a cost to the firm."⁹⁶

4.2.2 Shareholding

By the end of the eighteenth-century, it became the norm to have captains and agents acquire shares in ventures: out of the 211 slave ventures declared at the Admiralty between 1763 and 1792,⁹⁷ captains were shareholders in 45,⁹⁸ that is 21.33%. This trend is accentuated at

⁹⁴ Rinchon (1964) p. 296.

⁹⁵ A.C.M., 4J 2318.

⁹⁶ Carlos (1994) p. 317.

⁹⁷ From J. Mettas (1984) vol.2.

⁹⁸ A.C.M., B 5752-5810.

the end of the eighteenth-century, since most cases are found after 1779. In 1787, André Bégaud, captain of the *Nouvelle-Betsy*, had an interest of 51/ 768 in the venture.⁹⁹ Paul Hardy had an interest in the 1787 venture of the *Réparateur*, fitted out by Weiss.¹⁰⁰ In some cases, agents in the colonies were also associated in the venture: the firm Poupet frères, brokers at Le Cap, held shares in the *Betsy*¹⁰¹ besides the captain Tourneur who himself had an interest of 6/96. The Garesché brothers, agents at Port-au-Prince, participated (6/16) in the fitting out of the *Bergère*, while its first owner, Daniel Garesché only had a share of 7/16 in the venture.¹⁰² Similarly, Cadieu who worked as an agent for Richemont and Garnault in Port-au-Prince took a substantial interest of 32/96 in the *Bonne-Société*.¹⁰³

4.2.3 The *pacotille*

This term denoted goods that officers could embark freight free, either for their own use or on behalf of private individuals, in order to exchange them in Africa against slaves or gold, or sell them in the West Indies.¹⁰⁴ They were in most cases tolerated by the *armateur*, for they could work as a premium for the officer, who as an intermediary, received a commission on the sale of these goods that could be as high as 50%.¹⁰⁵ Proa expected his uncle to give him some *pacotille* for his second trip, since he considered it the only way for an officer of making a fortune: “I could have had some *pacotille*, especially since it is what makes the profits and the wealth of those who sail and since each officer has, according to his rank, the right to embark a certain quantity of goods.”

⁹⁹ A.C.M., B 6039.

¹⁰⁰ A.C.M., B 5794.

¹⁰¹ A.C.M., B 5771.

¹⁰² A.C.M., B 5771.

¹⁰³ A.M.L.R., Ms. 2290.

¹⁰⁴ J. Clark (1981) p. 135.

¹⁰⁵ J-M Deveau (1994) p. 62.

Belille, engaged as first lieutenant on the *Nouvelle Betsy*, received *pacotille* worth 309 livres from Mr Charles Chessé, for which he perceived a commission of 50%, that is 154.50 livres, which amounted to nearly two months' wages. These revenues may have been even greater, since Belille, as most officers, received *pacotille* from more than one donor.¹⁰⁶ Some *armateurs* however forbade it, but the archives showed no evidence that vessels were systematically searched, which means that the threat of detection did not work as a credible deterrent. In most cases, *armateurs* turned a blind eye to minor cheating in which most actors of the trade were involved. De Richemond & Garnault forbade captain David to embark any *pacotille*,¹⁰⁷ while at the same time entrusting 4,365.14 livres worth of *pacotille* to him, from which he received 1455.05 livres.¹⁰⁸

4.2.4 Other incentive devices

The practice of placing bonds upon employment, designed to secure employee's loyalty since the costs of losing one's job became more expensive, was absent in La Rochelle. No evidence of it was found in the archives. This is because the ventures that operated in La Rochelle were short-term and the partnerships renewed for each expedition, although a more stable pattern among shareholders can be identified, since they often remained together throughout several ventures. This also reflects the merchant's limited liability of committing himself to long-term employment, because of the high uncertainty of trade and the need to redeploy his activities. The aftermath of the Seven Years Wars was characterized by a wave of bankruptcies, from Amsterdam to London,¹⁰⁹ which also affected firms in La Rochelle, and which explains the prudence of most *armateurs*.

¹⁰⁶ A.C.M., B 6039.

¹⁰⁷ A.M.L.R., Ms 2290, 5th July 1783.

¹⁰⁸ A.D.C.M., Ms. 2290.

¹⁰⁹ O. Pétré-Grenouilleau (1997) p131.

4.2.5 Competition

Competition, by driving out incompetent or deviant individuals, promotes efficiency, encourages profit-maximizing behaviour and cooperation among agents.¹¹⁰ Agents in the colonies underwent fierce competition from other firms. Although disagreements rarely led to break-up, this threat was however credible: in 1780, B. Giraudeau transferred the ongoing business account he had with Mrs Nau François & Cie concerning the ships *Le Robuste* and *Le François* to Garesché & Billoteau, on the grounds that the former had shown “ a lack of goodwill”¹¹¹ regarding his interests. Faced with Mrs Nau François & Cie’s reluctance to hand over the account, the *armateur* took the case to court. Such break-ups in the absence of criminal charges were rare, because of the high enforcement costs involved: Giraudeau would have had to settle commissions twice, once with Mrs Nau François & Cie, and once with Garesché & Billoteau. By contrast, competition among captains played a more limited role. Allen¹¹² notes that “efficiency wages” created an unemployment pool of officers in the British Navy and this served as a monitoring device, but there is no evidence that there was a surplus of captains in La Rochelle, except during the economic crisis following the Seven Years War. Some Rochelais *armateurs* had difficulties in finding captains with sufficient qualifications who would accept the conditions they offered. When de Richemond and Garnault were looking for a captain for their ship *La Bonne Société*, the former captain, David, offered his services.¹¹³ Although not familiar with the African Coast, he knew the vessel and there was no one else available to replace him so that David made great demands: a 6% commission on the slave sale, 2% on the debts recovery in Saint-Domingue, a slave and a monthly salary of 200

¹¹⁰ Milgrom & Roberts (1992) p. 175.

¹¹¹ A.C.M., 4J 1610, letter of 18th July 1780.

¹¹² D. Allen (2002) pp. 204-231.

¹¹³ A.M.L.R, Ms. 2290, letter of 16th May 1783.

livres, which amounted to 40,000 to 50,000 livres in total.¹¹⁴ Garnault wrote to de Richemond:¹¹⁵ “I would like to have a captain at hand, I would give him the ship (...). I can’t resolve what to do in this case.” They regained their bargaining advantage when they found a new potential captain¹¹⁶ and David was compelled to accept their conditions:¹¹⁷ “If he doesn’t want the 5% commission, we will give the command of the *Bonne-Société* to a very informed captain from here, who will accept inferior advantages. This captain will be M. Guenet to whom Giraudeau and others attach great importance.”

4.2.6 Promotion

Several models have stressed the importance of promotional possibilities in increasing employees’ levels of efficiency and productivity¹¹⁸ or in solving problems of moral hazard and private information.¹¹⁹ The fact that the earnings of captains were much larger than that of other officers shows it was more rational for trainees to stay honest than cheat because of long-term benefits. Moreover, the promotion scheme based on performance and productivity encouraged agents to self-select and this self-enforcing device lowered transaction costs. Despite the short-term nature of employment contracts in the slave trade, durability and repeated games could be achieved by recruiting from a stable pool of officers aspiring to become captains: Pellier, second captain for Garesché in 1773, served Carayon as first captain in 1775 and was three times captain for Dumoustier de Frédilly.¹²⁰ Jean Boullangé,

¹¹⁴ A.C.M., E 447, April 1783.

¹¹⁵ A.M.L.R, Ms. 2248, letter of 8th April 1783.

¹¹⁶ A.M.L.R, Ms. 2248, letter of 10th April 1783.

¹¹⁷ A.M.L.R, Ms. 2248, letter of 15th April 1783.

¹¹⁸ See Wintrobe & Breton, ‘Organizational Structure and Productivity’, *The American Economic Review* 76, 1986, p.536.

¹¹⁹ MacLeod & Malcomson, ‘Reputation and Hierarchy in Dynamic Models of Employment’, *Journal of Political Economy* 96, 1988, pp. 832-835.

¹²⁰ A.C.M., B 5771, B. 5789, B. 5793, B. 5796.

lieutenant in the same 1773 venture, served Dumoutier and Fleuriau as captain.¹²¹ Among Garesché's captains, Garlache Corbie and Micheau were promoted from second captain to captain.¹²² Another advantage offered by the promotional structure is that it provided *armateurs* with a cheap monitoring mechanism, by creating incentives for ambitious officers to report their captain's misbehaviour in an attempt to gain their *armateur's* approval and be promoted.¹²³

4.2.7 Monitoring devices

Monitoring devices were not widespread because monitoring and information collecting were costly.¹²⁴ *Armateurs* used to give general instructions to their captains and agents, which amounted to guidelines and requirements for the trade. These instructions often named the port of destination, and precise details were given as to which *commissionnaire* should be contacted in each colonial port, as the "Orders and Instructions" of the *Bonne-Société* show: "you will anchor at Le Cap where you'll find out whether it would be better to trade there rather than at Port-au-Prince or at St Marc; if you can't see any reason why you should stay at Le Cap, go down to Port-au-Prince which is the place you should favour; you will go and see M. Cadieu, but if you were staying at Le Cap, it would be Mrs. Le Baffiniac & Cie and at Saint Marc, M. Majorel & St Macaray."¹²⁵

The Ordonnance de 1681 also institutionalised some of the practices in the slave trade, especially with regard to renegotiation or renegeing on contracts, alterations in the route or destination and desertion in cases of accidents, defined the required punishments in case of

¹²¹ A.C.M., B. 5771, B. 5783.

¹²² A.C.M., B. 5789.

¹²³ See Allen (2002) pp. 220-229.

¹²⁴ Pratt & Zeckhauser (1985) p. 5.

¹²⁵ A.M.LR., Ms. 2290.

offence, and the duties of captains and officers. More generally, *armateurs* encouraged the keeping of records¹²⁶ and of legal reports that could serve as official documents in case of dispute with the insurers.¹²⁷ All incidents on board were recorded in the ship's log, and were reported in a declaration signed by several witnesses, officers and seamen alike.¹²⁸ All commercial activities were recorded in accounting books¹²⁹ later addressed to the *armateur*. These records contain information on the quantity of goods dispatched in Africa, the numbers of slaves sold, general expenses for the maintenance of the crew and the ship, and the exchange rate for the slaves sold in the colonies. Lastly, the presence of relatives of the *armateur* training on board or officers who were likely to report any problem to the Admiralty on their return constituted a powerful check on the captain. The role of officers is not to be neglected, since they had to be consulted in case the captain had to go against the *armateur's* orders.¹³⁰ The captain was liable in case of agreements made against the *armateur's* consent and fees that resulted from disobedience to instructions were borne by him, as explicitly expressed by de Richemont and Garnault to David: "we find it useful to recommend that you not return to any other port than ours on no account; and we inform you that if you acted differently, you would be liable for all the charges and commissions we would have to pay."¹³¹ Similarly, when his captain stayed behind in Saint-Domingue despite his orders, Vivier made a declaration at the Admiralty, stating he refused to be liable for the expenses subsequently incurred and reserved the right to sue his

¹²⁶ A.M.L.R., Ms. 2290. Several ship's logs have survived: see A.M.L.R., Ms. 282, A.M.L.R., Ms. 856.

¹²⁷ A.M.L.R., Ms. 2290.

¹²⁸ J-M. Deveau (1994) p. 102.

¹²⁹ A.M.L.R., Ms. 2291.

¹³⁰ Gaston-Martin, *Nantes au XVIIIe siècle, L'ère des négriers, 1714-1774* (Paris, 1993), p. 39.

¹³¹ A.M.L.R., Ms. 2290, "Ordres et instructions", Article 15.

captain.¹³² Besides, *armateurs* and captains kept a regular correspondence during the expedition, and *armateurs* could adapt their instructions to circumstances in the West Indies.

Frequent letter exchanges were also established between *armateurs* and agents in the colonies: on the one hand, they provided information about ship movements, prices, cargo composition and market conditions; on the other hand, they helped reinforce mutual trust. By conveying information about other agents, they also guaranteed a form of social control. Carayon's captain, Desfossés, informed him that his agents Garesché had taken good care of his cargo, while they, in turn reported the good behaviour of his captain.¹³³ A degree of uncertainty as to the role of the captain in the colonies with regard to sales and debt collections, or the overlapping roles of agents and captains can be interpreted either as an inefficiency or as a way to solve agency problems, competition between agents and captains creating incentives to report improper acts and lowering information costs.

4.3 Adverse selection

The slave trade required officers, not only with excellent maritime competences and social skills, but also with business qualities. The uncertainties of trade reinforced the difficulty of assessing a captain's competence. However, the way in which David,¹³⁴ captain of the *Bonne-Société*, keeps justifying his decisions in his correspondence, his lack of initiative on several occasions on the Angolan Coast and in Martinique, finally the very poor results from his trade, are all signs of incompetence, as clearly expressed by Cadieu, Garnault and de Richemond's agent in Port-au-Prince, and a shareholder in the venture¹³⁵: "Having no reasons

¹³² A.C.M., B 5786.

¹³³ A.C.M., 4J 1610, letters of 31st July & 29th December 1780.

¹³⁴ A.M.L.R., Ms. 2289.

¹³⁵ A.M.L.R., Ms. 2289, letter of 20th February 1786.

to be pleased of M. David, I will keep silent; his lack of wisdom, or that *je ne sais quoi* prejudiced against us, given the sale he carried out at the Martinique”. Formal training on ships first acted as a guarantee of an agent’s competence. During his first expedition as a *pilotin*, Proa, who aspired to become a captain, had to submit to the daily task of writing a ship’s log, in which activity the captain and other officers supervised him.¹³⁶ To be made captain, an officer had to have sailed on merchant vessels for more than five years, have spent two campaigns of at least three months each in the Navy, and passed the examination at the Admiralty, which involved being questioned by officers of the Admiralty on ocean navigation, and taking a hydrographic test.¹³⁷ Experience and age also served as a selection device. Despite being acquaintances and their knowledge of the ship, the *armateur* Carayon was reluctant to give the command of the *Sénac* to Chouteau and Proa, whom he judged too “young”.¹³⁸ Again, reputation and personal exchanges were the strategy most frequently used by Rochelais *armateurs* to deal with adverse selection. Similarly, although most agents had received formal and vocational training in well-established trading firms before migrating, reputational mechanisms based on kin-centred networks predominated.

5. Social and cultural strategies in the settlement of agency problems

5.1 Reappraisal of the agency theory

Agency theory relies heavily on devices set at the ex-ante contractual stage. Social rewards, understood as non-wage aspects of employment contracts, are not taken into account because of the discretionary nature of these benefits and because of their non-

¹³⁶ A.C.M., 4J 2318.

¹³⁷ Valin (1760) TIT.I, article 1.

¹³⁸ A.C.M., 4J 2318.

verifiability, even when they play an important role in controlling post-contractual opportunism. Implicit relational contracts are mutual understandings of give-and-take between the different players involved. This model includes non-monetary incentives such as sociability, approval, status or power, and expands the concept of self-interested behaviour to include social factors. In order to assess the organizational features of long-distance trade and its economic rationality, the cultural, social and political framework in which it operated should not be underestimated.¹³⁹

5.2 Social rewards

For example, and far from being just a subordinate, a captain enjoyed a high degree of autonomy in his decision-making, and officers and armateurs alike generally respected his view.¹⁴⁰ Crassous, a captain himself, compares a captain to a monarch: “A ship is like a small state to govern. Fortunate is the captain who meets a good second and a honest man, like a King who chooses a good minister and a wise council.”¹⁴¹ Most *armateurs*’ instructions allowed for captains, better informed, to decide where to trade. The orders given by Garesché to Van Alstein stipulated that the latter could settle in the African port that he thought would favour trade the most, to which the *armateur* added, as a sign of trust and respect: “I am inclined like you to favour the ports of Malimbe and Cabinde as the healthiest and the wealthiest.”¹⁴² Similarly, the port of disembarkation in the West Indies was ultimately a function of local market conditions and fell within the competence of the captain.¹⁴³

¹³⁹ See Greif (1997), Greif (1998), O. Pétré-Grenouilleau (2001).

¹⁴⁰ Meyer (1999) pp. 15-18.

¹⁴¹ A.M.L.R., Ms. 283.

¹⁴² Rinchon (1964) p. 297.

¹⁴³ A.C.M., 4J 2318.

It would be wrong to see the different worlds of agents and principals as hermetically bounded. Agents' aspirations become principals and be socially promoted fostered an informal collaboration between the two groups. The possibilities of social mobility was present in the slave trade for those who did not come from a commercially active family and worked as incentives for captains and agents who wished to return to France as *armateurs*. Michel Poupet, who by the 1790's had built the finest mansion in town, started off as a *commissionnaire* in Saint-Domingue.¹⁴⁴ The captains Saint-Pé¹⁴⁵ and Crassous¹⁴⁶ both outfitted vessels. Amable Lesenne bought a plantation worth 100,000 colonial livres in Saint-Domingue, and later retired as the squire of the Tourtillière near La Rochelle and as *Trésorier de France*.¹⁴⁷ It usually took more than one generation to climb up the social ladder. Jacques Rasteau, a captain turned *armateur*, founded the Rasteau dynasty.¹⁴⁸ Careers as agents also served to straighten out the family's fortune, financially and socially. Proa was the son of a ruined *armateur*. Aimé-Benjamin Fleuriau settled in Saint-Domingue as an agent after his father's bankruptcy. His fortune made, he was able to return to La Rochelle, restore his reputation by paying off his father's debts, and obtain letters patent of nobility.¹⁴⁹

These careers aimed as much at personal enrichment as social acceptance and cultural integration into the milieu of slavers. Their integration into this restricted social milieu was sometimes achieved by marriage, as shown by Rasteau Father who married the daughter of an *armateur*, and by Guymet. By their adoption of *armateurs'* cultural and social norms, captains and agents belonged to a social and cultural elite,

¹⁴⁴ A.C.M., 4J 884.

¹⁴⁵ A.C.M., B 5777.

¹⁴⁶ A.M.L.R., Ms. E 278.

¹⁴⁷ Deveau (1994) p. 105.

¹⁴⁸ Clark (1981) p. 47.

¹⁴⁹ Jacques Cauna, *Au temps des isles à sucre : Histoire d'une plantation de Saint-Domingue au XVIIIe siècle* (Paris, 1987), p. 26.

which moved in *armateurs'* circles and distinguished themselves by their education and their tastes for literature, theatre, philosophy, history and geography.¹⁵⁰ Because they were allowed to wear a sword, captains and officers were often tempted to slip towards aristocratic status.¹⁵¹ Van Alstein tried to prove his aristocratic origins that will have him fully accepted by the society of wealthy *armateurs*.¹⁵²

5.3 A trading community

According to these findings, it is possible to define the Rochelais slaving milieu as a trading community with specific organizational functions. First, distinctiveness was established through matrimonial strategies often based on endogamy and reinforced by homogeneous social and cultural norms, both factors contributing to the exclusion of outsiders. In the absence of social connections and financial backing, Supiot, a rope maker, had difficulties outfitting *Les Trois Soeurs*, which was his first and last venture.¹⁵³ However, this milieu was not entirely closed, with many mechanisms allowing for the acceptance of outsiders, such as the taking of shares in one another venture, in which captains and agents, non-merchants and non-Rochelais could participate. This flexibility showed adaptability, non-Rochelais investment alleviating a severe local shortage of capital from the 1780's.¹⁵⁴ Second, the sense of community persisted through well-established networks of communication, developed along kinship and friendship lines. They ensured that sanctions imposed through multilateral enforcement mechanisms, (mainly exclusion from the social and economic circle of

¹⁵⁰ For a portrait of this nascent bourgeoisie, see O. Pétré-Grenouilleau, *Moi, Joseph Mosneron, Armateur négrier nantais (1748-1833) : Portrait culturel d'une bourgeoisie négociante au siècle des Lumières* (Apogée, 1995), Rinchon (1964), J. Périer, *La prospérité rochelaise et la bourgeoisie protestante au XVIIIe siècle* (Paris, 1899).

¹⁵¹ A.C.M. , 4J 2318.

¹⁵² Rinchin (1964) p. 402.

¹⁵³ Deveau (1994) p. 76.

¹⁵⁴ Clark (1981) pp. 220-222.

shareholders by the community), were effective and credible. The circulation of information, by guaranteeing that fraud was detected, could also reinforce the threat of legal action. Moreover, these networks, by making and unmaking reputations, contributed to the development of a “moral community”, in which mutual trust could flourish and which benefited to commercial activities. The ideology behind these social and cultural norms was that of a nascent trading bourgeoisie fostered by the colonial trade, and whose interest could be differentiated at the national level from other socio-economic groups.¹⁵⁵ This concept of a community can be extended to include other Atlantic ports, to which La Rochelle was linked socially, economically and culturally. The French Atlantic was constituted of a network of locally organized and highly connected communities.

6. Efficiency

As noted by A. Carlos,¹⁵⁶ “the current work on efficient labour contracts and agency theory points out that the conduct of agents or managers is not independent of the actions taken by principals.” Although the efficiency of institutions is usually function of productivity based on the efficient use of labour, the impossibility to calculate levels of productivity from the records means that efficiency is evaluated as a function of the level of opportunism open to agents. The archives do not show evidence of widespread opportunism. However, Eltis and Richardson have shown that English slave traders were more efficient than the French ones.¹⁵⁷ Stein argues that the personal nature of business structure in the French

¹⁵⁵ See Deveau, *Le commerce rochelais face à la Révolution : correspondance de Jean-Baptiste Nairac* (Rumeur des Ages, 1989).

¹⁵⁶ A. Carlos (1992) p141.

¹⁵⁷ Eltis & Richardson, ‘Productivity in the Transatlantic Slave Trade’, *Explorations in Economic History* 32, 1995, pp. 465-484.

Atlantic impeded the development of an efficient organization and prevented merchants, reluctant to work in sectors where they lacked a commercial network, from adapting to new opportunities.¹⁵⁸ Multilateral reputation mechanisms are limited by the size of the information network and the size of the group affects proportionally the volume of trade.¹⁵⁹

6.1 Formal enforcement mechanisms

Many argue that trust operating on a limited scale cannot be the sole foundation of cooperation in complex societies.¹⁶⁰ Legal and political organizations, becoming third parties, ensure that commitment to cooperation based on contractual relationships is credible. Contracts allow for each party constantly to monitor the other for violations of the original agreement. Although reputational mechanisms were a strong deterrent to opportunism, Rochelais merchants were willing to take matters to court if necessary. Besides, a legal framework solves the problem that informal mechanisms have to discriminate between insiders and outsiders, so as to make the threat of exclusion credible, and allows for impersonal relations and larger merchant networks.¹⁶¹ However, even formal institutions cannot guarantee that asymmetries of information and interests will be efficiently dealt with. North challenges the notion that institutions are always efficient in solving the problems of coordination and reducing transaction costs, since efficiency “is determined by the *motivation* of the players (their utility function), the complexity of the *environment* and the ability of the players to decipher and order the environment (measurement and enforcement).”¹⁶² This section examines

¹⁵⁸ R.L. Stein, *The French Slave Trade in the Eighteenth-Century: An Old Regime Business* (Wisconsin, 1979), p. 201. See also Marzagalli, “The French Atlantic”, *Itinerario* 23, n°2, 1999, pp. 70-83.

¹⁵⁹ Platteau (2000) p. 255.

¹⁶⁰ *Ibid*, p. 254.

¹⁶¹ Kasper & Streit (1998) pp. 111-114.

¹⁶² North (1990) p.34.

in which ways the efficiency of agency structures in La Rochelle was influenced by the political and social environment and questions the facile optimism that formal institutional arrangements are optimal.

Considering the high costs of monitoring induced by the nature of long-distance trade and the difficulties of imposing penalties, wages based on commissions were an efficient way of controlling captains' behaviour.¹⁶³ As for agents, instead of having individual contracting agents working on commission, as was mostly the case in La Rochelle, *armateurs* could either establish partnerships with colonial firms or use their own firm as a way to better control exchange networks.¹⁶⁴ Besides allowing for a congruence of interests, combining diverse sources can diminish the financial and time losses caused by breakdowns in bargaining between agents and *armateurs*. However, these savings would have been offset by the uncertainty of trade and the unpredictable necessity to change agents. Subcontracting allowed for greater flexibility. Moreover, Rochelais *armateurs* refrained from investing in firms because of the restricted size of the merchant's community and the lack of capital at the end of eighteenth-century. Most *armateurs* had a reliable information network and agents' commissions were low enough for the system as such to be efficient. In the Anglo-Saxon model, where the rights of the creditor / *armateur* were better protected, agents received commissions as high as 10%, but in return, they assumed full responsibility for collecting all slave sale debts.¹⁶⁵

Agency problems were thus not at the core of the organizational inefficiencies of the French slave trade. The efforts of French slavers on the African Coast were undermined by English and Dutch competition. First, the scarcity of French forts on the African coast undermined the

¹⁶³ Pratt & Zeckhauser (1985) p10.

¹⁶⁴ O. Pétré-Grenouilleau (1997) p. 108.

¹⁶⁵ Price (1991) p. 311.

bargaining power of French captains. Second, the legal system was designed to favour the Royal Navy above private merchants: private ships were seen as a training ground for Navy recruits and the number of crew members strictly regulated by the Ordonnance of 1681. Each vessel had to embark a novice for five men and a ship's boy for ten.¹⁶⁶ For the same tonnage, English or Dutch crews were smaller by a third.¹⁶⁷ Third, the major problem remained the insolvency of plantation owners and the inefficiency of the credit system.¹⁶⁸ The French legal system, unlike its English counterpart, did not allow for the assets of an indebted planter to be seized. English *armateurs* could rely on immediate remittances, though at the cost of higher commissions to their agents.¹⁶⁹

6.2 Informal enforcement mechanisms

Although kin networks are a reliable way to solve problems of trust, they may not be the most efficient, since they might lack appropriate incentives. Guibert reproaches his cousin Garesché for not having protected his interest by sending his vessel to Port-au-Prince when it should have stayed in Le Cap for its sale.¹⁷⁰ However, there are few examples of merchants going to court: it seems that community enforcement norms based on reputation were effective enough to prevent large-scale opportunism. It is also possible that the records do not perfectly reflect reality: cases of dishonesty may have been covered up by relatives in order to save reputation and honour and sanctions are more problematic when applied to kin.¹⁷¹ Besides, though kin networks may be efficient in solving problems of post-contractual opportunism, they do not address issues of adverse selection. Van Hoogwerff refused to

¹⁶⁶ Valin (1760) LIV. II, Tit. I.

¹⁶⁷ Laveau (1988) p. 85.

¹⁶⁸ For a discussion of credit systems, see Price (1991) pp. 293-339.

¹⁶⁹ *Ibid*, p. 339.

¹⁷⁰ A.C.M., 4J 1610, letter of 12th July 1777.

¹⁷¹ Platteau (2000) p. 262.

hire his brother, whom he considered incompetent and unreliable, as his agent.¹⁷² Kinship, in the same way as religion, did not play as important an organizational role as usually thought, and “in circles where all things were more and more defined by economic criteria, the sole obstacle to economic success and social integration were personal skills, reputation and luck.”¹⁷³

Informal enforcement mechanisms allow for relations of trust to develop. It is now acknowledged that levels of trust, especially between superior and subordinates, are positively linked with productivity and efficiency levels.¹⁷⁴ Letters exchanged between *armateurs*, captains and agents include many examples of commendation or praise. Information networks, by adding communication to the Prisoner’s Dilemma model, made cooperation possible. Self-enforcing contracts derived from reputational mechanisms and social norms are rational and efficient as they economize on the transaction costs of protecting contracts.¹⁷⁵ This means that in such cases, limited monitoring is relatively successful as shown by the absence of widespread auditing and penalties in La Rochelle. Considering the costs of legal action, it is also cheaper to rely on informal mechanisms for small sums. The optimality of informal enforcement mechanisms is function of the size of the community.¹⁷⁶ The restricted size of La Rochelle’s slaving community, with a few dozens of regular investors and less than a hundred captains, allowed reputational mechanisms to operate efficiently.

¹⁷² A.C.M., 4J 2848.

¹⁷³ O. Pétré-Grenouilleau (2001) p. 178.

¹⁷⁴ Wintrobe & Breton (1986) p. 532.

¹⁷⁵ Coleman (1990) p. 261.

¹⁷⁶ M. Cohen, ‘Norms versus Laws: Economic Theory and the Choice of Social Institutions’, in *Social Norms and Economic Institutions*, eds. Koford & Miller (Michigan, 1991), p. 97-99.

6.3 Inferences drawn

In a world of imperfect information, there are many possible equilibrium outcomes and a more micro analytic approach allows for a reconsideration of the efficiency of private ordering as opposed to legal centralism and court ordering. An obvious point is that it was fairly difficult to experiment with different legal systems and different agency structures at the time so that a definite conclusion on the relevance of any institution cannot be reached. Incentive structures in La Rochelle seem to have been fairly efficient. The high risks involved in the slave trade justified the *armateurs*' emphasis on compensation salaries rather than punishments and fines. Rochelais *armateurs* combined an implicit contract with a formal contract structure, which improved efficiency through flexibility. When reputational mechanisms failed to prevent agent opportunism, *armateurs* would then resort to legal solutions. These findings provide a case for a reappraisal of the role of legal and formal contractual mechanisms, and a positive reassessment of private arrangements between individual players as a way to curb agent's opportunism. Institutional change was not due to organizational inefficiencies, but to political crises in Saint-Domingue and in France. Although this aspect would need to be developed separately, it is possible to already outline the fact that economic decline can partly be accounted for by the legal and state structure. Acemoglu et al. show that the nature of political and legal national regimes is the factor that mostly affected the economic dynamism of merchant communities fostered by the Atlantic trade.¹⁷⁷

¹⁷⁷ Acemoglu et al., 'The Rise of Europe: Atlantic Trade, Institutional Change and Economic Growth', CEPR, Discussion Paper n°3712, 2003.

Conclusion

A first point is that a reappraisal of the agency theory seems possible, based on elements that suggest that social incentives played a greater role than often assumed. Ex-ante mechanisms designed to solve agency problems are usually emphasized, with little attention paid to ex-post mechanisms such as social rewards, which, as this study shows, also play an incentive role. Agency theory can benefit from empirical studies and the integration of social, cultural, political and environmental variables into its model, which would make it more adapted to the analysis of cases study such as this one.

Agency structures in La Rochelle rested upon a mixture of social connections and institutional arrangements, which appeared to have functioned well. These findings go against the view that the transition to modern capitalism was accompanied by a shift from personal to impersonal business relations, and that these two types of enforcement mechanisms are incompatible. Rather, an empirical approach is better able than a predetermined model to show that the evolution of institutions and their adequacy depends on historical circumstances. In the Rochelais case, the persistence of reputation-based mechanisms allowed for greater flexibility, which was well adapted to a high risk trade. The decline of the slave trade at the end of the eighteenth-century seems to have been caused by factors other than principal-agent problems. Despite what is usually assumed, the institutions that governed economic exchanges in La Rochelle were modern. It is more and more widely acknowledged that even in capitalist societies reputation-based institutions, by circulating information, facilitate exchange and complement legal contract structures. Further historical research is needed as to provide us with the foundations for a model that accounts for agency structures composed of a mixture of formal institutions and informal strategies based on multilateral mechanisms.

Bibliography

1. Primary Sources

Archives Médiathèque de La Rochelle (A.M.L.R)

Ms. E 283: log of the *Ile-de-France* (1791).

Ms. E 278: papers of the *Junon* (1782).

Ms. 282: log of the *Dahomet* (1772).

Ms. 856: log of the *Amitié* (1786).

Ms. 1946-1949: family papers Van Hoogwerff.

Ms 2247-2248: correspondence between J-J. Garnault and M. de Richemond.

Ms. 2289: correspondence about the *Bonne-Société*.

Ms. 2290: documents relating to the *mise-hors* of the ship the *Bonne-Société*.

Ms. 2291: accounting book of the *Bonne-Société*.

Archives Départementales de Charente-Maritime (A.C.M.)

- Records of the Admiralty- Série B:

B 5752- B 5810: declaration of ships between 1763 and 1792.

B 5978: Captains' entry files, 1779-82

B 5979: *ibid*, 1783-85

B 5980: *ibid*, 1786-88

B 5981: *ibid*, 1789-91

- Papers of persons who died at sea or in the colonies (18th century):

B 6039: Papers Belille, lieutenant on the *Nouvelle-Betsy* (1787)

- Correspondences:

B 6055: correspondence with the clerk of the court, Dubreuil

- Private documents:

E 446: family papers M. de Richemond, 1780

E 447: Ibid, 1773-1784

E 448: Ibid, 1783

E 449: Ibid, 1783-84

E 450: Ibid, 1785-86

E 451: Ibid, 1786

4J 884: Papers of the families related by marriage Guymet, Poupet,
Lefebvre, Gaudin, Callot.

4J 1610: Garesché Papers

4J 2318: Copy of *Jacques Proa's Memoirs*

4J 2847: copy of the letters sent by Van Hoogwerff (1770-1783)

4J 2848: copy of the letters sent by Van Hoogwerff (1784-1805)

- Provincial administrations – Série C:

Série Ilc 3424 / 25 : Register of sepultures of religionnaires.

- Manuscripts :

René Josué Valin, *Nouveau commentaire sur l'ordonnance de la Marine du mois d'août 1681*, Jérôme Legier, 2 vol.

2. Secondary Sources

Theoretical literature

Daron Acemoglu, Simon Johnson & James A. Robinson, 'The Rise of Europe: Atlantic Trade, Institutional Change and Economic Growth', CEPR (Centre for Economic and Policy Research), Discussion Paper n° 3712, January 2003.

- D. Allen, 'The British Navy Rules: Monitoring and Incompatible Incentives in the Age of Fighting Sail', *Explorations in Economic History* 39, 2002, pp. 204-231.
- Kenneth J. Arrow, 'The Economics of Agency', in John W. Pratt & Richard J. Zeckhauser (eds.), *Principals and Agents: The Structure of Business*, Harvard Business School, 1985, pp.37-51.
- Robert Axelrod, *The Evolution of Cooperation*, Basic Books, 1984.
- Ann M. Carlos & Stephen Nicholas, 'Agency Problems in Early Chartered Companies: The Case of the Hudson's Bay Company', *The Journal of Economic History* 50, 1990, pp. 853-875.
- Ann M. Carlos, 'Principal-Agent Problems in Early Trading Companies: A Tale of Two Firms', *The American Economic Review* 82, 1992, pp 140-145.
- Ann M. Carlos, 'Bonding and the Agency Problem: Evidence from the Royal African Company, 1672-1691', *Explorations in Economic History* 31, 1994, pp. 313-335.
- Mark A. Cohen, 'Norms versus Laws: Economic Theory and the Choice of Social Institutions', in *Social Norms and Economic Institutions*, in Kenneth J. Koford & Jeffrey B. Miller (eds.), The University of Michigan Press, 1991.
- James S. Coleman, *Foundations of Social Theory*, The Belknap Press of Harvard University Press, 1990.
- B. Curtis Eaton & William D. White, 'Agent Compensation and the Limits of Bonding', *Economic Inquiry* 20, 1982, pp. 330-343.
- Avinash K. Dixit, *Lawlessness and Economics: Alternative Modes of Governance*, Princeton University Press, 2004.
- M. Granovetter, 'Economic Action and Social Structure: The Problem of Embeddedness', *American Journal of Sociology* 91, 1985, pp. 481-510.

- Avner Greif, 'Reputation and Coalitions in Medieval Trade: Evidence on the Maghribi Traders', *Journal of Economic History* 49, 1989, pp. 857-882.
- Avner Greif, 'Cultural Beliefs and the Organization of Society: A Historical and Theoretical Reflection on Collectivist and Individualist Societies', *The Journal of Political Economy* 102, 1994, pp 912-950.
- Avner Greif, 'Contracting, Enforcement and Efficiency: Economics Beyond the Law', *Annual World Bank Conference on Development Economics*, 1996, pp. 239-265.
- Avner Greif, 'Microtheory and recent developments in the study of economic institutions through economic history', in David M. Kreps & Kenneth F. Wallis (eds.), *Advances in economics and econometrics: theory and applications*, Seventh World Congress, Vol. 2, Cambridge University Press, 1997, pp. 79-113.
- Avner Greif, 'Historical and Comparative Institutional Analysis', *American Economic Review* 88, 1998, pp. 80-89.
- Philip T. Hoffman, Gilles Postel-Vinay & Jean-Laurent Rosenthal, 'Information and Economic History: How the Credit Market in Old Regime Paris Forces Us to Rethink the Transition to Capitalism', *American Historical Review* 104, 1999, pp. 69-94.
- Wolfgang Kasper & Manfred E. Streit, *Institutional Economics: Social Order and Public Policy*, Edward Elgar, 1998.
- Janet Tai Landa, *Trust, Ethnicity, and Identity: Beyond the New Institutional Economics of Ethnic Trading Networks, Contract Law, and Gift Exchange*, The University of Michigan Press, 1994.
- Paul E. Lovejoy & David Richardson, "Pawns Will Live When Slaves Is Apt to Dye': Credit, Slaving and Pawnship at Old Calabar In the Era of the Slave Trade', 1997, LSE Department of Economic History Discussion Paper No 38.

W. Bentley MacLeod & James M. Malcomson, 'Reputation and Hierarchy in Dynamic Models of Employment', *Journal of Political Economy* 96, 1988, pp. 832-854.

John McMillan, *Games, Strategies and Managers*, Oxford University Press, 1992.

Paul Milgrom & John Roberts, *Economics, Organization and Management*, Prentice Hall, 1992.

Douglass C. North, *Institutions, Institutional Change and Economic Performance*, Cambridge University Press, 1990.

Jean-Philippe Platteau, *Institutions, Social Norms and Economic Development*, Harwood Academic Publishers, 2000.

John W. Pratt & Richard J. Zeckhauser (eds.), 'Principals and Agents: An Overview', in *Principals and Agents: The Structure of Business*, Harvard Business School Press, 1985, pp. 1-35.

Oliver E. Williamson, *The Economic Institutions of Capitalism: Firms, Markets, Relational Contracting*, The Free Press, 1985.

Ronald Wintrobe & Albert Breton, 'Organizational Structure and Productivity', *The American Economic Review* 76, n°3, 1986, pp. 530-538.

Maritime Trade in the eighteenth-century

Kenneth J. Banks, *Chasing Empire across the Sea: Communications and the State in the French Atlantic, 1713-1763*, McGill - Queen's University Press, 2002.

Fernand Braudel, *Civilisation matérielle, Economie et Capitalisme, XVe-XVIIIe Siècle*, Paris : Armand Colin, 1979, 3 Vol.

Paul Butel, *Les Négociants bordelais, l'Europe et les Iles au XVIIIe siècle*, Editions Aubier-Montaigne, 1974.

Paul Butel, *The Atlantic*, Routledge, 1999.

- David Eltis and David Richardson, 'Productivity in the Transatlantic Slave Trade', *Explorations in Economic History* 32, 1995, pp. 465-484.
- Jean-Michel Deveau, *La France au temps des négriers*, France-Empire, 1994.
- Gaston-Martin, *Nantes au XVIII^e siècle, L'ère des négriers, 1714-1774*, Editions Karthala, 2nd Ed., 1993.
- Silvia Marzagalli, 'The French Atlantic', *Itinerario* 23, n°2, 1999, pp. 70-83.
- Jean Mettas, *Répertoire des expéditions négrières françaises au XVIII^e siècle, Ports autres que Nantes* », Paris, Société Française d'Histoire d'Outre-mer, Vol. 2, 1984.
- Jean Meyer, *L'armement nantais dans la deuxième moitié du XVIII^e siècle*, Editions de l'EHESS, 2nd Ed., 1999.
- Olivier Pétré-Grenouilleau, *Moi, Joseph Mosneron, Armateur négrier nantais (1748-1833) : Portrait culturel d'une bourgeoisie négociante au siècle des Lumières*, Editions Apogée, 1995.
- Olivier Pétré-Grenouilleau, *Les négoce maritimes français XVII-XX^e siècles*, Belin SUP, 1997.
- Olivier Pétré-Grenouilleau, 'Long-distance trade and economic development in Europe and Black Africa (Mid-fifteenth century to Nineteenth century): Some pointers for further comparative studies', *African Economic History* 29, 2001, pp. 163-196.
- Jacob M. Price, 'Credit in the slave trade and plantation economies', in B. L. Solow (ed.), *Slavery and the Rise of the Atlantic System*, Cambridge University Press, 1991, pp. 293-339.
- Robert Louis Stein, *The French Slave Trade in the Eighteenth-Century: An Old Regime Business*, The University of Wisconsin Press, 1979.
- Perry Viles, 'The Slaving Interest in the Atlantic Ports, 1763-1792', *French Historical Studies* 7, 1972, pp. 529-543.

La Rochelle in the eighteenth-century

- Jacques Cauna, *Au temps des isles à sucre: Histoire d'une plantation de Saint-Domingue au XVIIIe siècle*, Editions Karthala, 1987.
- John G. Clark, *La Rochelle and the Atlantic Economy during the Eighteenth-Century*, The John Hopkins University Press, 1981.
- Jean-Michel Deveau, *Le commerce rochelais face à la Révolution : correspondance de Jean-Baptiste Nairac*, Rumeur des Ages, 1989.
- Emile Garnault, *Le commerce rochelais au XVIIIè siècle, d'après les documents composant les anciennes archives de la Chambre de Commerce de La Rochelle*, A. Challamel (ed.) & E. Martin (Imprimeur typographe à La Rochelle), 1900, 5 vol.
- Claude Laveau, *Le monde rochelais des Bourbons à Bonaparte*, Rumeur des Ages, 1988.
- Danielle Miet, 'Evolution économique et sociale d'une famille rochelaise : la famille Poupet au XVIIIe siècle', Unpublished Maîtrise Thesis, Université de Poitiers, 1982.
- Jean Périer, *La prospérité rochelaise et la bourgeoisie protestante au XVIIIe siècle*, Typographie Firmin-Dot et Cie, 1899.
- P. Dieudonné Rinchon, *Pierre-Ignace-Liévain Van Alstein, Capitaine négrier (Gand 1733- Nantes 1793)*, Mémoires de l'Institut Français d'Afrique Noire, n° 71, Ifan-Dakar, 1964.
- Henri Robert, *Les trafics coloniaux du port de La Rochelle au XVIIIe siècle*, Mémoires de la Société des Antiquaires de l'Ouest, P. Oudin : Poitiers, 1960.

Other sources

- David Eltis, Stephen D. Behrendt, David Richardson, and Herbert S. Klein, 'The Trans-Atlantic Slave Trade: A Database on CD-ROM', Cambridge University Press, 1999.

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