Looking for the historical origins of coopetition: back to Antique Romans traders

Le Roy, Frédéric
University of Montpellier and Montpellier Business School
frederic.le-roy@umontpellier.fr

Mira Benjamin
Montpellier Business School
benjamin.mira@hotmail.fr

Résumé :

L'objectif de cette recherche est de mettre en évidence les origines historiques de la coopétition. Une approche historique est utilisée pour mettre en évidence des stratégies de coopétition dans l'Antiquité Romaine. Deux exemples de coopétition sont mis en évidence dans l'industrie du transport marchand. Ces exemples permettent de mettre en évidence les raisons pour lesquelles ces stratégies ont été mise en œuvre. La recherche montre que la coopétition est très ancienne et qu'elle n'est pas nécessairement liée aux conditions contemporaines des marchés.

Mots-clés : Coopétition, Histoire, Antiquité Romaine

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INTRODUCTION

Coopetition appears as a new hybrid strategy in the academic literature (Yami et *al*, 2010; Bengtsson and Kock, 2014; Czakon *et al.*, 2014). Many authors present this strategy as a new mindset resulting from the complex contemporary economy (Brandenburger & Nalebuff, 1996; Zineldin, 2004; Chin *et al.*, 2008; Hanachi & Coleno, 2012; Ben Letaifa & Rabeau, 2012). Furthermore, according to Gnyawali and Park (2009), coopetition is an emerging concept with increasing practice in high-technology sectors.

The major thesis that we support is that coopetition is not only a modern but also an ancestral strategy. We thus assumed that if coopetition is a normal behaviour rather than a contemporary strategic singularity, coopetition should be a strategy that has always been used. By proving it, we could show the natural characteristics of this strategy and thus erase all the prejudices of a modern strategic response to the new hypercompetitive environment (Levinson & Asahi, 1995).

This paper suggests a contribution to the knowledge about origins of coopetition. It is divided in three major parts. The first one is devoted to the historical of coopetition, as we know it through the academic literature. In the second part, we focus on methodology. We show how this idea to find the origins of coopetition came to us, why it is useful to use historical approach as a methodology in strategic management research, and how we use it. In the third and last part, we describe the results and discuss about the contributions of our research.

1. COOPETITION: A MODERN STRATEGY ?

1.1. COOPETITION: THE ACADEMIC BIRTH

The interest of academics about coopetition is relatively young (Ketchen *et al.*, 2004). Ray Noorda introduced the word during the eighties to describe the relationships between his

firm and its stakeholders (Fisher, 1992). The best-seller of Brandenburger and Nalebuff untitled "Co-opetition" (Brandenburger & Nalebuff, 1996) introduced the concept of coopetition into the public area and into the academic world (Stein, 2010). The first academic paper with the word coopetition in the title is published in 1996 as an *essay* (Dowling *et al.*, 1996). At the end of the nineties Bengtsson and Kock give the academic foundation of coopetition theory (Bengtsson and Kock 1999, 2000). Since the publication of the best seller of Brandenburger and Nalebuff in 1996 there is a growing attention of academics in strategic management on coopetitive strategies (Gnyawali *et al.*, 2006; Luo, 2007; Walley, 2007; Chen, 2008; Gnyawali *et al.*, 2008; Yami et *al*, 2010; Bengtsson and Kock, 2014; Czakon *et al.*, 2014).

Brandenburger and Nalebuff (1996) define coopetition as an interaction between actors of a value net. In a closer approach, other authors reduce their definition to cooperation between two competing firms (Bengtsson & Kock, 2000; Gnyawali & Park, 2011). Coopetition is defined as a "simultaneous pursuit of collaboration and competition between a pair of firm" (Gnyawali & Park, 2011, p. 651).

Coopetition defined like this is counter-intuitive. Two competing firms should, *a priori*, maintain their own resources and competencies and, especially, to do not share it with their rival. Alliances between competitors are therefore fundamentally different from alliances between non-competing firms (Dussauge *et al.*, 2000). They carry conflicting logics where relations of power between opponents-partners occur (Hamel *et al.*, 1989; Fernandez *et al.*, 2014). Hamel and colleagues (1989) consider that the object of a strategic alliance with competitors is to put enough strength in common to create a competitive advantage, while avoiding transferring to much know-how to partners. This conception emphasizes on the "competitive opportunity" of the alliance and on the desirable maintaining of "independence of partners".

Coopetition is a risky strategy. Firms have to be strongly constrained to adopt this type of strategy. Generally, several factors help to explain the development of coopetitive strategies during the past thirty years (Gnyawali & Park, 2009; Fernandez & Le Roy, 2010). The first one is the global-size race. Facing markets becoming more and more global, firms are engaged in a size race that they can't win with their own resources. The second explanatory factor is the technological race. It is increasingly rare for a firm to be the only one to have

the necessary resources to develop innovations in their industries. Continued growth in R & D budgets forces more and more companies to pool their research.

In this context, the most interesting partner for a firm is the one who develops similar resources, or highly complementary. Therefore, this partner is able to offer comparable products to the same consumers. Following this logic, paradoxically, the most dangerous is a competitor, the most he is interesting (Hamel *et al.*, 1989; Hamel, 1991; Lei *et al.*, 1997). The best allies are at the same time the most formidable rivals on the market (Hamel *et al.*, 1989).

The coopetitive logic seems to have become inescapable in sectors engaged in both races to globalization and technology. This is particularly the case in TIC industry (Pellegrin-Boucher *et al.*, 2013). In TIC sector, coopetitive strategies bring many advantages. Today, not any companies in this sector can escape to it. Developing strategic alliances with competitors is mandatory to giants such as IBM or Microsoft, likewise to smaller firms (Pellegrin-Boucher *et al.*, 2013). In this perspective, coopetition appears as a modern strategy, that as been developed during the past thirty years to face contemporary economic constraints. However, there are older sources that allow questioning this assumption.

1.2. COOPETITION AFTER WW2

Many researches show the existence of cooperative strategies between competing firms after the Second World War. These strategies were led in Japan, Europe, and also in the United States.

1.2.1. Coopetition initiated by the MIT in Japan

Historically, Japan is the first country to have led deliberately a coopetitive strategy to straighten its industry after the war and to permit its internationalization (Ozawa, 1974; Okimoto *et al.*, 1984; Blackburn, 1988; Abchordoguy, 1989). The MITI, created in 1949, is the main actor of this deliberate strategy. It encouraged industrials acting in a same industry to cooperate on two links of the value chain: innovation and exportation. Numerous coopetitive projects were initiated by the MITI during the 1960's. One of the most emblematic is the Fontac Project, launched by the MITI in 1962. It included Fujitsu, NEC and Oki in the IT industry. The main objective was to react versus IBM's second-generation computers. This first coopetitive project was rather a failure, especially because IBM launched computers of new generation just after its take-off. A second project was therefore initiated in 1966 by the MITI, the Ogata Project. This project included six competing

Japanese firms (Fujitsu, Hitachi, Mitsubishi, NEC, Oki and Toshiba) and a public laboratory of research.

The principle of R&D consortium to gather competitors of the same industry under the auspices of public authorities was enlarged to other industries. Thereby, in 1975, a strategic alliance is created between the public company Nippon Telegraph and Telephon (NTT) and two competing firms, Hitachi and Fujitsu. The objective was to encourage the emergence of a Japanese semiconductors industry. NTT pledged to supply from the two-linked industrial, which realised R&D investments together. In 1976, the MITI created a consortium, VLSI Technology Association, composed by Nec, Toshiba, Fujitsu, Hitachi and Mitsubishi. The objective of this consortium was to develop the application of semiconductors to the Japanese computers industry.

1.2.2. Coopetition initiated by European governments

European companies use coopetitive strategies since many years ago. Thus, Le Roy (2008) shows the dynamism of coopetitive strategies introduced between SMEs in the French fishing industry of tropical tuna during the 1960's. He shows that coopetition between competing SMEs allowed the creation of a new industry. Similarly, Le Roy and Guillotrau (2010) show that the canning of tropical tuna industry was built on coopetitive logic during the 1960's.

Beyond these initiatives coming from the companies themselves, European countries embarked in coopetition institutionally. This institutionalization of coopetition was done in a different way than the Japanese one. Japanese government created consortiums of R&D. The different European governments initiate programs from the development of products to the sell on market. Aeronautic was the first industry were these programs were launched. Three main programs are emblematic of this period (Briard & Seran, 1976). The first on is Mercure 100 program, which corresponds to a subsonic twin-engine aircraft of 150 seats. This program was jointly developed by four competitors: Dassault (France), Fiat (Italy), CASA (Spain) and SABCA (Belgium). Motors are provided by two competitors: SNECMA and Pratt & Whitney.

A second example of coopetition is the development of the Concorde program. The French Sud-Aviation possessed its own aircraft Caravelle. The Britain BAC was its direct competitor with Bristol 223. Especially thanks to funding from their both governments, these two companies associated in 1962 to support program's R&D costs together. Motors

were also provided by a coopetitive agreement, because BAC partnered with SNECMA to develop Concorde's turbojet engine. Airbus A300 program is the third example of coopetitive program launched in Europe. Three aircrafts manufacturers associated to develop the first European longhaul: Sud Aviation (France), Hawker Siddeley Aviation (GB) and Deutsche – Aviation (FRG). Motors are also made by three competitors: Rolls-Royce, Snecma and Man Turbo.

We have to notice that these cases of coopetition are not always a success. Mercure program has never been a commercial success. As far as that goes, Concorde has been a commercial failure. However, these two programs allowed the development of technologies that have been very useful to develop Airbus program, which has been such a great commercial success, to become, today, the main competitor of Boeing in the aircraft construction industry.

1.2.3. Apollo: a coopetitive project?

It is often assumed that the United States considered cooperation between competitors as arrangement for a long time, which slowed the development of coopetition. Thus, we have to wait until 1984 and the creation of the National Cooperation Research Act, which allowed R&D consortiums, to see coopetition developing. Nevertheless, it is possible to find examples of coopetition during the 1960's. Thus, Vin Hippel (1987) shows the long tradition of informal exchanges of technology in the American steel industry. In the same way, the research of Depeyre & Dumez (2010) shows that American government promotes coopetition in the Defence Industry since a long time.

The most spectacular case of coopetition during the 1960's is Apollo program (Launius, 1994). Thereby, this program was realised under cooperation between many companies from aeronautics. The company North American, famous for having made the Mustang during the Second World War, then the rocket plane X-15, provides many elements: the main rocket-engine, the second floor of Saturn V, and the control and service module Apollo. But North American wasn't the only working on this project. Grumman developed the lunar module, McDonnell Douglas made the third stage of Saturn V and Chrysler made the first floor.

Coopetition is present at every project's industrial steps. There were about 500 direct subcontractors who have worked on Apollo, and about 250 indirect subcontractors (Launius, 1994). These subcontractors are in most cases direct competitors on other markets. For example, only for the main component of Saturn V rocket, three competing firms were

engaged: Boeing for the first floor, North American for the second, and Douglas Aircraft Corporation for the third. Apollo seems to be an example of coopetition in aeronautics industry, under the impulsion of the American government.

1.3. COOPETITION : IN SEARCH OF ORIGINS

As we shown, coopetition as a strategy does not concern only the post eighties area. Is it possible to go sooner to find the origin of coopetition? Existing sources permits to establish that coopetition strategy is used since more than one century. The first examples date from the end of the 19th century with the first MLS (Multi Listing Service) between real estate agents in the US, and from the beginning of the 20th century in the Sealshipt Oyster System. It is also in this example that we found the word "coopetition" for the first time (Cherington, 1913). Then, the historian Rockwell Dennis Hunt reintroduced the word in one of his article, published in 1937 in the L.A. Times.

It is also possible to identify cases of coopetition in other industries. For instance, it is established that there were, before the Second World War, agreements allowing systematic exchanges of R&D results between Imperial Chemical Industries (GB) and DuPont de Nemours (US) (Hounsell and Smith, 1988). Beyond these agreements, Freeman (1982) shows that there are veritable R&D partnerships in the United States, such as in the case of Catalytic Research Association in the United Stated between 1938 and 1943.

These examples show that the historical border of coopetition could be postponed until the beginning of the twentieth century. Can we postpone it further? In order to ask to this question we propose to resort to a historical approach. This approach takes us back to Roma, during Antiquity, to the roots of Western history.

2. METHOD

2.1. HISTORICAL METHOD

Our objective is to find examples of application of coopetition strategies in trade and business in the past. By highlighting ancient coopetitive actions, it could bring us pertinent information in order to enlarge our common knowledge about this strategy and to better understand it. Studying a phenomenon across time, longitudinally, enables to watch it changing, to interpret it, thus possibly to anticipate it, while replacing the observed object in its context and history (Marmonier & Thiétart, 1988). We mobilize the historical approach to find results and to produce managerial implications in small and very small businesses.

This methodology is highly pertinent to tackle some issues. By definition, historical approach, also called historical perspective, is the description, the analysis and the explanation of events across time. According to Bousquet (2005), the use of this methodology has boomed during the 1980's in research of marketing (Savitt, 1980). But researchers seem to forsake it, even if some of them frequently use it in other areas of management (Hidy, 1977).

This method is principally descriptive. The goal is usually to be inductive, not deductive. It follows that the practice of doing historical research is based more in the narrative tradition, like telling story (Kahl *et al.*, 2012). It is also a comparison between examples found in the past with the contemporary ones.

A relevant example of the use of historical approach in strategy is developed in the article of Hopkins (1999), in which he demonstrates how Harley-Davidson has developed its strategies against its main competitor Honda. He shows how it is possible for a firm to anticipate crucial strategic decisions while mobilizing historical approach (Bousquet, 2005).

Historical approach is therefore perceived as a tool to analyse the past to better understand the future, and eventually to predict it (Greyer, 1964). This methodology can be combined to another one to understand a phenomenon globally.

2.2. IMPLEMENTING HISTORICAL APPROACH

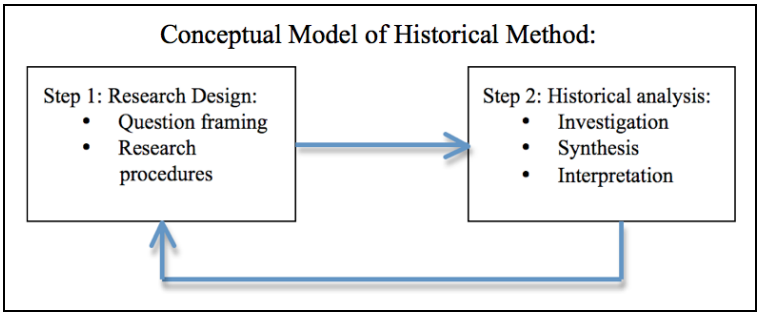
Our objective of research is a hard task. We don't have any clue to be sure to identify examples of coopetition in the past, so the use of historical approach as a methodology has to be well anticipated and though.

While researching, three key dimensions have to be ensured simultaneously: time, space and object. Temporal dimension means that researches have to be driven at the right time. The second, spatial dimension is relative to the place where we are investigating. And the last dimension is related directly to the object of research. In other words, we need to know "where", "when" and "what" to search. By mobilizing and ensuring the validity of these three dimensions while investigating, it helps researchers to have feedback and to increase the probability of success. For example, if you are sure about the existence of an object in a defined period of time, that means two dimensions are ensured. If you don't find the object you are looking for, it means you aren't looking at the right place.

The main difficulty of our research stands in the fact that only one dimension is ensured, the one related to the object. Spatial and temporal dimensions are hypothesis with low rates of

probability. That's why the use of historical approach must be based on a clear defined methodology. Savitt (1980) was the first researcher to create this kind of methodology. Then, it was developed by Smith and Lux (1993).

Figure 1: Historical method



In the first step, we have to define our question framing. In our case, it's to find examples of coopetition strategies in trade and business in the past. Then, the three key dimensions of investigation have to be explained. We chose to focus on Roman Antiquity between the IInd BC and the IInd AD centuries for many reasons. First of all, it's one of the oldest periods where we can find many epigraphic documents to apply the methodology. Moreover, during antiquity, the organization of trade was significantly similar to ours, with almost only small businesses. "Roman market rivalled early modern European and colonial American markets in terms of institutional complexity, and, perhaps, efficiency" (Kessler & Temin, 2007, p.330). In fact, maritime trade was very developed because of the huge area of the Roman Empire. That's how we defined the temporal dimension. With regard to the spatial dimension, we chose to focus on the region of Arles in the South of France. During Roman Antiquity, this city was one of the most important trading place of the Empire and was called "Small Rome of Gaul". Finally, the last dimension is related to the object, that is to say coopetition strategies between tradespeople.

The second step, historical analysis, is composed of three points: investigation, synthesis and interpretation. We conducted our investigation by physical meetings and calls with three experts of roman trade, two archaeologists and one historian. They gave us several clues and track of investigation to follow through articles and books to read. We took notes, analysed and interpreted secondary data.

3. RESULTS

By applying historical approach we found examples of coopetition during the Roman Antiquity. Roman Empire during Antiquity was immensely extended. It went from Near-East to Iberian Peninsula and from Maghreb to Great Britain, reaching during the Ist century 5 million square kilometres. Its development lasted 1000 years, from the Republic period around the Vth century BC, to the split of the Empire between Eastern and Western Empire during the IVth century. At its apogee, the Roman population during the Ist century reached 88 million of inhabitants. Roman Empire was more urban than most agrarian societies. Around ten cities counted 100,000 inhabitants. In Rome, there were 1 million inhabitants, and not any city will count as many until London at the end of the XVIIIth century (Kessler & Temin, 2007).

Trade has greatly contributed to the development of Rome and its Empire (Nicolet, 1988) and more precisely maritime trade. Its development is incommensurate in Mediterranean Sea and its highest level of activity won't be matched until the end of the XVIIIth century (Tchernia, 2011). Transport of goods by common routes on land for more than tens kilometres are excluded because of high costs they could generate and material conditions to mobilize. Only four ships of 20,000 modii[1] were necessary to provide the daily consumption of Rome, which corresponds to 1000 carts if land routes were used (Pomey & Tchernia, 1978).

Through the description of maritime trade during Roman Antiquity, we will explain the trading process at this time through the point of view of merchants, from the purchase of goods to the sell to the final consumer. We will describe and detail how and why tradespeople developed coopetition strategies.

Roman merchants organized themselves and used varied mechanisms such as institutions and other social structures to face issues linked to the lack of information in long distance trade. Long distance trade was characterized by the lack of information until the invention of telegraph (Kessler & Temin, 2007). There was uncertainty all along the journey because not any information was transmitted until goods' delivery. We will explain how roman merchants adopted coopetitive strategies to face these uncertainties and issues caused by asymmetry of information.

[1] One modius is a unity of measure, here 20,000 modii correspond to 130 tons.

At this time, the four most lucrative activities were: renting building, agriculture, lending money and maritime trade. The two last activities were closely linked because to start doing business, lending an amount of money was mandatory.

Being a landholder was honourable whereas being a merchant wasn't. Tradespeople suffered from a very bad reputation. On the one hand, many ancient authors at this time, such as Horace or Platon, denounced their cupidity. On the other hand, other authors evidenced their utility such as Ciceron or Seneca who compared their usefulness to cities to the usefulness of doctors to patients. Landholders didn't practice long distance trade (Tchernia, 2011), they sold their own products to local merchants who exported it afterwards. Merchants acted on relatively free markets despite some occasionally interventions of Roman government to stabilize prices of wheat (Kessler & Temin, 2007). These merchants were in competition locally because "when several merchants sell the same products in the same area and there is formation of prices, there is competition" (Tchernia, 2011, p. 171).

Profession of maritime merchant at this time could be defined as a wholesaler activity. Firstly, they had to purchase goods to sell it afterwards, whence the obligation to borrow money (Whittaker, 1985). This element is given in a Seneca's text, extracted from Epistulae ad Lucilium, 119, 1: *« I will teach you the faster way to get rich; by using shortcuts, I will lead you to great wealth. However, you will need a lender: to do business, you have to borrow money »*. Company worked thanks to credit (Veyne, 1993) and trade was financed by loan granted by rich landholder, whence the other strong link between loaning and agriculture (Rathbone, 2008). Rich senators divided their wealth in two activities, on the one hand agriculture and on the other hand individual loans. A law was voted to force them to respect a proportion between these two activities, but the very remunerative characteristic of loans leads them to violate this law and cause the financial crisis in year 33. Lending money was a very lucrative activity and maritime loan was more remunerative but riskier. Its reimbursement rate was very low because of a very high level of defection, scams and many malice acts during Republic times. Among measures which were taken at this time to face this high level of uncertainty at different levels (information, accident, piracy, barratry), merchants created institutions to coordinate, disseminate and share information. Kessler and Temin (2007) talk about institutional strategies by creating private institutions such as merchants' association, which are similar to some association of professionals we can meet

nowadays and in which they share information and work in collaboration. The first institution that we evoke is the option of formal funding, through collective loan.

Caton, described as a cupid senator and rich landholder, around the IIIrd century BC, wanted to diversify its activities, and to have more lucrative ones with mitigated risks (Tchernia, 2011). He invented collective loan at the end of his life to ensure less uncertain earning, less subject to meteorological vagaries like agriculture. *"It's loaning to a group instead of individual socii that Plutarque presents as an invention of Caton"* (Rathbone, 2003, p.214). He started the activity of collective maritime loan, comparable to modern concept of microcredit (Tchernia, 2011).

De Martino (1979) insists on the originality of the process required Caton by quoting Plutarque's works. To ensure reimbursement of loans, Caton asked his borrowers to form an association. They had to create a society by assembling enough colleagues to gather fifty merchants and fifty ships. This society worked following a principle of auto-selection and auto-management. Borrowers were therefore linked together and each had a part of responsibility, which established a social pressure on them. This is how merchants cooperated, via a common society. This didn't only decrease maritime risks, but also the one linked to borrowers disloyalty. Caton allocated loans of a large number of ships, thereby reducing risks of maritime incidents.

This collective loan, called *"fenus nauticum",* had a fixed and high rate. It allowed merchants to purchase goods, then they repaid it after having sold these goods. Its refunding was mandatory except in case of loss of cargos into the sea due to meteorological conditions because an insurance was included. The lender was also a member of the society via one of his slaves to keep an eye on the activity. Sometimes, his slave made the journey on the ship to ensure that not any deceptive acts occurred. Furthermore, we have several examples of texts describing trials for insurance scams.

Collective loan is the first activity of collaboration between merchants during maritime trade process. After having purchased their goods, they cooperated on another activity: sea freight. Because of the incredible expansion of Rome during Antiquity, maritime roads developed a lot. We count around fifty different roads in Mediterranean Sea (Scheidel, 2013). Acts of barratry and piracy occurred very often during Roman Republic, and also loss of goods into maritime incidents due to meteorological hazards. The main maritime roads were all along the Mediterranean coast, which were deemed for their reefs and violent winds. Sea was very

dangerous and engulfed many boats, this is why we called the Lion Gulf, real predator for ships. Between the south of Gaul and Corse, more than two hundred wrecks are listed and dated from the end of the IIIrd century BC to the beginning of the Ist century (Long, 2004), attesting to frequency of shipwrecks.

Facing these high uncertainties related to navigation's conditions and to ensure cargos' delivery, merchants freighted ship in common. To avoid most of loss of goods, merchants divided their total quantity of goods on various ships. Multiplicity of cargos thereby divided risks of loss of cargos due to maritime incidents or deliberates acts. A shipwreck represented a terrible economic loss. If we take the example of a boat carrying wheat, staple diet of a Roman citizen, whose personal annual consumption was around 300 kilos (Kessler & Temin, 2007). The average size of a trade boat was 10,000 modii (around 70 tons). One modius of wheat cost between 1 and 1,5 denarii to the final consumer. In comparison, the average wage of a skilled worker was between 0,5 and 1 denarius per day (Sperber, 1974). Therefore, in case of shipwreck, it's between 10,000 and 15,000 denarii of market value of goods that are lost, corresponding to thirty years of a skilled worker's wage. However, some cargos from East had such huge values. This is an example of the ship "Hermapollon" carrying a cargo from India to Rome, and its value was around 7 million sesterces, or about 1.75 million denarii. This corresponds to the fortune of a senator who doesn't count among the richest. Another example reached incredible values. An inscription found in a funerary oven and interpreted by De Romanis (2006) described exceptional cargo from the first century. The value of the cargo reaches 90 million sesterces, or about 22.5 million denarii. The total value of goods arriving in this case in a month was 350 million sesterces, a third of the budget of the Roman state. Pliny the Elder noted that the Eastern imports cost 100 million sesterces a year to Roman Empire, which corresponds to 10% of its whole budget. Amounts of East maritime trade are incommensurate with the amount of the Mediterranean maritime trade. Most of these goods were intended to Rome and fed a trade where considerable capital were involved (Tchernia, 2011).

The highest the tonnage was and the cheapest the fret was (Tchernia, 2011), which influenced merchants to fill boats for deliveries by associating. Freight transports of goods by the sea were long and expensive. Scheidel (2013) calculated and estimated prices and durations of journeys for every maritime road of Mediterranean Sea. For example, a journey between Ostia (harbour of Rome) and Messina in Sicilia lasted 4 days and cost 6 denarii. A

journey between Alexandria and Ostia lasted 18 days and cost 16 denarii. By comparing these data to the average wage of a skilled worker, it gives us clues about the magnitude of the journeys' costs. It was possible to rent space on a boat of another merchant or to freight it entirely (mercium uehendarum). Some merchants were owners of their boat, and other didn't.

Plurality of merchants is common. Hesnard and Gianfrotta (1989) had already observed "common freight for a journey" about Italian wine at the end of Republic time. This example of cooperation between competing merchants was discovered due to amphorae found on shipwrecks. They give excellent clues and indications because the names of merchants, wholesalers, potential intermediaries and recipients were written on it. Moreover, we know what they contained because of their shapes (Etienne & Mayet, 2002). Names written on it give us the number of merchants who coexisted during the same period of time and for the same traffic, thus explaining competition among them (Tchernia, 2011). After the discover and the analysis of Port-Vendres II shipwreck in Mediterranean Sea, inscriptions on amphorae indicate that nine different merchants associated to rent this ship (Colls, Dali, & al., 1977).

With many owners for an only freight, risks are divided; the effect is the same as the one about the association imposed by Caton to his borrowers. It is an act of safety which needs many actors and transactions.

We also have other examples of cooperation between Roman merchants, which referred directly to coopetition. Kessler and Temin (2007) quote The Guild System of Ostia that built institutional barriers against environmental hazards and preserved members from merchants' opportunistic acts. These guilds were formal organizations of men linked by a common activity. Authors approach the subject of coopetition without naming it: "All guilds allowed their members to compete freely with each other" (Kessler & Temin, 2007, p. 326). As the association created to get collective loan, these guilds were auto-managed in order prevent members' malicious acts. Members could reject a merchant's ask for membership, or also punish members who behaved badly. Merchants relied on the incentives to preserve reputations in order to promote honesty and fair dealing. Somebody who is afraid of being punished would be less likely to cheat. We have examples of guilds like The Piazzale delle Corporazioni in Ostia, which was the first physical institution where information among merchants of wheat was shared. Wine merchants also met at Forum Vinarium. It clearly

appears that merchants met deliberately to coordinate and to share information (Kessler & Temin, 2007).

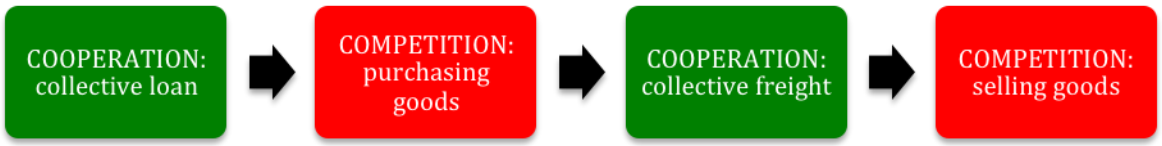
These institutions played an important role in reducing costs linked to asymmetry and incomplete information problems. Merchants used economical and social institutions to reduce costs of environment's uncertainties. These institutions increased amount of available information among merchants and helped the development of maritime trade.

4. DISCUSSION

The question of this research is the historical origins of coopetition. The most widely accepted theory is that coopetition is a modern strategy induced by the double race to globalization and technology, which began at the beginning of the 1980's (Zineldin, 2004; Chin *et al.*, 2008; Hanachi & Coleno, 2012; Ben Letaifa & Rabeau, 2012). However, many major examples of coopetition are identified from the 1950's. Driven by public policies in Japan (Ozawa, 1974; Okimoto *et al.*, 1984; Blackburn, 1988; Abchordoguy, 1989), and in Europe (Briard & Seran, 1976), coopetition is responsible for many industrial successes. It is also possible to found examples of coopetition from the beginning of the XXth century. The major question asked is to know if it's possible to go back further in History, to the occidental civilization's origins.

Historical study of Roman merchants during Antiquity gives a positive answer. This study shows that Roman merchants used coopetitive strategies since the beginning of the IIIrd century BC. They combined cooperative and competitive activities in the trading process, as following in figure 2.

Figure 2: Value chain of Roman merchants



In the first activity of the value chain, to get collective loan, merchants cooperated via an association asked by the lender. Cooperation was not only informal but was institutional. Merchants were linked together via the association's management, which imposed to them a social pressure, diminishing loan default risks.

Once funding is obtained, in the second activity of the value chain, merchants were rivals to purchase goods from suppliers at the best price. Loan obtained collectively allowed them to purchase goods individually, without any form of cooperation.

Into the third activity of the value chain, related to ship freight, merchants cooperated to minimize risks of cargos' loss due to sea accidents or deliberate acts of piracy. Social pressure stayed strong but wasn't institutionalized as for collective loan. This was the result of merchants' deliberate strategy due to strong economies of scale in this activity of the value chain. Transport costs strongly decreased when cargos' burden increased, which made collective freight very profitable.

For the last activity of the value chain, once arrived at destination, merchants ended any form of cooperation and sold their goods individually. Rivalry was very strong to sell their goods to the same consumers.

This organization of the value chain is typical of coopetitive strategy as it will be defined by Bengtsson and Kock (2000) more than 2000 years later. Indeed, according to these authors, coopetition *"the dyadic and paradoxical relationship that emerges when two firms cooperate in some activities, such as in a strategic alliance, and at the same time compete with each other in other activities"* (Bengtsson and Kock, 2000, p. 412). Cooperative activities are related to collective loan and collective freight, and competitive activities are related to purchasing and selling goods. This case also echoes to coopetition's definition given by Nalebuff and Brandenburger (1996), who see coopetition as a convergence of complementary activities: *"firms collaborate in order to increase the size of the business pie, and then compete to divide it up"* (Brandenburger and Nalebuff, 1996, p.34). Therefore, we can consider that there was at least one case of coopetition during Roman Antiquity, three hundred years before Christ.

This case helps to identify drivers of emergence of coopetitive strategies. Caton put his borrowers in coopetition through an auto-managed association. This auto-management principle established a social pressure above borrowers to ensure refunding. Although very profitable, individual loans had a very low refunding rate. So through the case of collective loan, it is a risk reduction logic which explains the emergence of coopetition. The example of cooperation between merchants for collective freight follows the same logic of risks diminution. Cargos were often victims of piracy, barratry or storm. Coopetition was therefore used to ensure delivery of a minimum part of the total cargo. We find here risk

reduction logic, which is one of the key explanatory factors for coopetition's development nowadays (Gnyawali & Park, 2009).

This case of Roman merchants during Antiquity also shed light on contractual forms of coopetition. Cooperation to get loan is an example of institutionalized coopetition through creation of an association by borrowers, driven by the lender (Caton). We find here an example of coopetition imposed by a third actor, as it could be possible in our contemporary period (Castaldo *et al.*, 2010; Depeyre & Dumez, 2010). This actor plays a role of initiator and manager of coopetition. Structure's management by the third actor appears as a tool and ensures good performance of implemented coopetition strategy.

In the case of collective freight, coopetition is not imposed by anybody. It related to fewer coopetitors (ten rather than fifty). Coopetition is not imposed but deliberate. Coopetitors choose to freight a ship together, without creating an institutional group. The association ends when the ship arrives at destination. Management of coopetition is done without a third actor's coordination but by adjustment among merchants.

Socio-economical dimension of coopetition seems to be as primordial as in contemporary cases. In the case of collective freight, social pressure exerted by each individual allows keeping good relations between them, and avoids opportunistic acts. This goodwill and mutual trust seems equally important in the decision to freight a whole ship in common. We can find here a relation to modern management of tensions resulting from coopetition (Fernandez & Le Roy, 2014). As in modern firms, success of coopetition seems to be strongly related to good performance of coopetition and therefore to good relations among individuals.

Size of firms involved in coopetition is another interesting element of discussion, which could resulted from this case analysis. Coopetition in antic maritime trade appears in very small business context. This contradicts the commonly shared idea by researchers that coopetition appeared first in big companies, in order to increase their power (Akdogan *et al.*, 2012). This belief may explain why researchers have initially focused on coopetition in large multinational firms (Jorde & Teece, 1989; Luo, 2007). However, the oldest case of coopetition indicates that strategy of coopetition was first adopted by very small business.

Results obtained and interpretations could only be considered within the limitations of the research. The coopetitive case studied appears at a dated period. It would be worthwhile to look for other examples of coopetition strategies in trade in other periods of History. Many

new questions come up in the wake of this study: is coopetition an exceptional strategy during this period of time? Can we found other examples of coopetition during other times? Is coopetition a common strategy as cooperation and competition? Is coopetition a common and natural strategy in business finally? The continuation of historical investigations allows us to provide answers to these questions and contribute to the growth of common knowledge on the strategy of coopetition.

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