

**COMPETITIVE ADVANTAGE THROUGH COOPETITION:  
A Case Study in Bulk Liquid Terminal Business in Santos City**

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**ABSTRACT**

*The aim of this research was to identify the strategic positioning of the bulk liquid terminal companies at the port of Santos-SP and identify the types of cooperative relationships among these companies. To attain the goal it was conducted an exploratory qualitative study. The research instruments used were structured questionnaire consisting multiple choice questions and direct observation during a year with participation in meetings with 16 managers of commercial, support and operational areas. As a result, the strategic positioning concentrates with high competition and low cooperation and the types of relationships identified were dominant relationship in competition.*

**Keywords:** *Coopetition. Strategic Positioning. Relationship. Business Network*

**1 INTRODUCTION**

Competitive advantage is a central theme in several areas of strategy (Porter, 1991), as, for example, the marketing researches in organisations (Collins & Porras, 1995; Morgan & Hunt, 1995), where they make important contributions to identify which are the factors that contribute to competitiveness. Consequently, the largest contributions come from the strategy area itself (Santos; Hexsel, 2005), focusing on Porter's work (1985, 1991, 1996) and Cravens's (1994), as well as those who are associated with Resource Based Vision (RBV), based on core competencies, prioritising external analyses for better strategic positioning (Wernelfelt, 1984; Prahalad & Hamel, 1990; Barney, 1991; Peteraf, 1993; Santos & Hexsel, 2005).

On the other hand, there are authors such as: Rumelt (1991); McGahan & Porter (1997); Vasconcelos & Brito (2004) that prioritise internal resources by considering that these resources get more weight than the external

environment on the performance of an organisation. However, Hansen, Hansen, & Perry (2004) assert that there are companies that are differentiated in the market with more sustainable competitive advantage than others, meaning they are *outliers*, which deserve to be understood in a more particular way (Santos & Hexsel, 2005).

Thus, the increase of competitive advantages is due to the need for companies to remain in the market and meet customer demands. It also provides the possibility of their participation in strategic alliances in acting in cooperation activities that are considered common among companies, even if they are competitors. In this sense, there is the solidification of cooperation opportunity in a market situation that provides the competition, which results in co-competition, which turns out to be a strategy for survival in highly competitive environments (Nalebuff & Brandenburger, 1996; Castells, 1999; Bengtsson & Kock 1999; Koch & Bengtsson, 2000; M'chirgui, 2005).

Given the context, co-competition is a growing event in organisations and has been analysed worldwide in industries, services, retail and others. It is included in this phenomenon the port terminal market operating in an environment with fierce competition, especially in the port of Santos, which is the main one in Brazil, because it presents an environment with fierce competition that generated co-competitive strategies, meaning the market survival with competition and cooperation, without affecting competition focused on customers in this segment. Thus, the co-competition, which is a broad concept, may fit the current terminal and/or other segments, which can contribute to the scientific academy.

Therefore, it is appropriate to research the bulk liquid terminal, due to the high competition in the same geographical area as well as in the provision of similar services to the same client group. It is understandable then that is relevant to the application of the theoretical model of Bengtsson & Kock (1999, 2000), which state that the occurrence of cooperation and competition, in its various forms, offers different types and levels/or degrees of cooperation and competition, such as dominant relationship in cooperation, balanced relationship and dominant relationship in competition. Therefore, there is a lack in the literature, specifically regarding co-competitive strategy in port terminals. It is precisely this lack that this research aims to fill by applying the theoretical model of Bengtsson & Kock (1999, 2000), the main port of Brazil. Thus, based on the first study, the objective of this research is to identify the strategic positioning of the companies and, based on the second study, it intends to identify the types of co-competitive relationships in bulk liquid terminals.

## 2 THEORETIC REFERENTIAL

### 2.1 Competition and Strategic Positioning

Competitiveness is growing in companies, making it a worldly discussed issue in the scientific academy and in various segments such as: industry, services, retail and others. Thus, the search for strategic alliances to survive in the market is continuous with the development of tangible resources through infrastructure, sharing of physical goods, beside intangible assets, such as relations with partner companies or competitors, technology, shared knowledge and human capital (Porter, 1985, 1991, 1996).

Authors such as Craves (1994); Hitt, Ireland & Hoskisson (2002), argue that competitiveness stems from a series of actions and competitive responses from organisations that compete within a particular industry. Hitt, Ireland & Hoskisson (2002) indicate still that the competitive strategies are used to explore existing asymmetric relations between competitors. That is, this rivalry is made possible because of differences in resources, existing capacities and skills between organisations, which are represented by the internal environment, due to the opportunities and threats of the external environment faced by each organisation.

Thus, the competitive behaviour of companies can be characterised by the maximisation of individual earnings, as well as the way to act in confrontation and by concealment of important information (Bengtsson & Kock, 2003; Leão, 2004, 2005; Bengtsson & Kock, 2014). Psychological factors, such as the prestige and pride of managers ahead of organisations also influence the competition and self overcoming of companies, which causes dynamism in the industry (Bengtsson & Kock, 2000; Leão, 2004, 2005; Bengtsson & Kock, 2014).

Bengtsson & Kock (2003) indicate that the rivalry between companies distinguishes a minimum level of interactions between competitors, which may vary accordingly to the relative positioning that the organisation has in the industry. Competition influences organisations to adopt conflicting attitudes to maintain themselves or improve their position in the industry thus hindering the interaction between them.

### 2.2 Co-competition

The consolidation of cooperation with competition is a concept addressed as co-competition (Nalebuff & Brandenburger, 1996). The concept of co-competition is to cooperate with competitors (Leão, 2005). It is a way to evaluate and conceptualise the interdependence effectiveness among companies, showing a partial trend structure

in order to create value to businesses, through cooperation and also competition (Dagnino & Padula, 2002). In this sense, cooptition is like a relationship based on balanced synergy with the competition in search of mutual benefit (Martinelli & Sparks, 2003).

In this context, for the analysis of cooptition in a given industry, this can occur at various stages of the industry production supply chain. Thus, considering, for example, three macro steps that reflect the input activity (shopping stage), of production (production stage), and output (market stage), it can be detected by means of the model, which type of relationship (coexistence, cooperation, competition or cooptition), according to Bengtsson & Kock typology (1999), predominates among the companies in each stage of the production chain.

Thus, for the authors proclaim: coexistence: in this type of relationship, the relation does not include any economic exchange, only information and social exchange; cooperation: the exchanges are common within the entire network and there may be various types of relationships, but the most common are the exchanges of knowledge and economic interests; competition: an action-reaction pattern emerges among competitors and follow each other, if one of the competitors launches a new product line, the other immediately follows; and cooptition: this relationship may include economic and non-economic exchanges. The power of the cooperative relationship is based on the functional aspects, according to the chain of value.

Bengtsson & Kock (1999, 2000) is the level of interactions (coexistence) that occurs when organisations collaborate minimally with their competitors who temporarily occupy complementary positions to their activities. However, as rivalry prevails, these organisations return to competitive behaviour when threats from other parties or opportunities of higher individual earnings emerge.

Although, if on the one hand the implications of competition are important to organisations, on the other, when acting as rivals, exceptionally competitively, organisations tend to take competition negatively, where everyone is worse off. Thus, the exclusively competitive kind of behaviour takes only temporary short-term returns, making it difficult to maintain long-term strategic competitiveness (Garcia & Velasco, 2002; Leão 2004). For this, the development of competition strategies is needed to engage stratagems that benefit from the gains of cooperation as well.

With the identification of the strategic positioning of Bengtsson & Kock (1999) studies, it was possible to identify the type of relationship that prevails between companies (coexistence, cooperation, competition or cooptition). Subsequently, those types of relationships covered by Bengtsson & Kock (2000) found that the occurrence of cooperation and competition, in its various forms, offers different types and levels/or degrees of cooperation and competition, such as: dominant relationship in cooperation: cooperation consists in more cooperation than competition, balanced relationship: cooperation and competition are equally distributed and dominant relationship in competition: cooptition consists in more competition than cooperation. For the authors, through the relationships typology, it is possible to identify and trace the degree or cooptition level regarding the intensity of cooperation and competition developed between the companies in a business network.

The presentation of the types of relationships model covered by Bengtsson & Kock (1999, 2000) will conduct the analysis of cooptition typology to answer the proposed research problem, which is to identify the types of cooptitive relationships in bulk liquid terminals.

### 3 METHODOLOGY

After an extensive review of literature on cooperation, it can be said that there were no empirical or theoretical research regarding the cooptitive relationships between bulk liquid terminal port companies. For this reason, the difficulties considered in the empirical stage of this study were presented in the literature as crucial aspects in competitive and cooperative relationships. The choice of the company occurred because it was an interesting case that could have brought both advantages and disadvantages of a cooptitive relationship among these companies. This way, the proposal of this research was to identify the strategic positioning of the companies in bulk liquid terminals based on studies of Bengtsson & Kock (1999) and identify the types of cooptitive relationships based on studies of Bengtsson & Kock (2000).

#### 3.1 Analysis Unit, Target and Sample

To attain the proposed goal, an exploratory qualitative study was conducted in bulk liquid terminals. For this, a survey of primary data was made with the managers of the following areas: commercial and support, operational and support (controller / client / quality and safety). Hence, there were a total of 16 interviewed managers according to Picture 1, and the interviews lasted from 18 minutes to one hour and twenty minutes.

Classification of respondents	Area respondents	Instrument	Interview duration
Subject 1	Commercial and support	Semistructured	47 min.
Subject 2	Commercial and support	Semistructured	1 time and 20 min
Subject 3	Operational	Semistructured	38 min.
Subject 4	Commercial and support	Semistructured	25 min.
Subject 5	Operational	Semistructured	35 min.
Subject 6	Support (controllershship/ customer / quality / security)	Semistructured	15 min.
Subject 7	Support (controllershship/ customer / quality / security)	Semistructured	18 min.
Subject 8	Commercial and support	Semistructured	37 min.
Subject 9	Commercial and support	Semistructured	28 min.
Subject 10	Commercial and support	Semistructured	49 min.
Subject 11	Commercial and support	Semistructured	43 min.
Subject 12	Support (controllershship/ customer / quality / security)	Semistructured	28 min.
Subject 13	Commercial and support	Semistructured	31 min.
Subject 14	Support (controllershship/ customer / quality / security)	Semistructured	47 min.
Subject 15	Operational	Semistructured	1 time and 7 min
Subject 16	Operational	Semistructured	39 min.
<b>In the results, the areas were identified as: commercial, operational and support</b>			

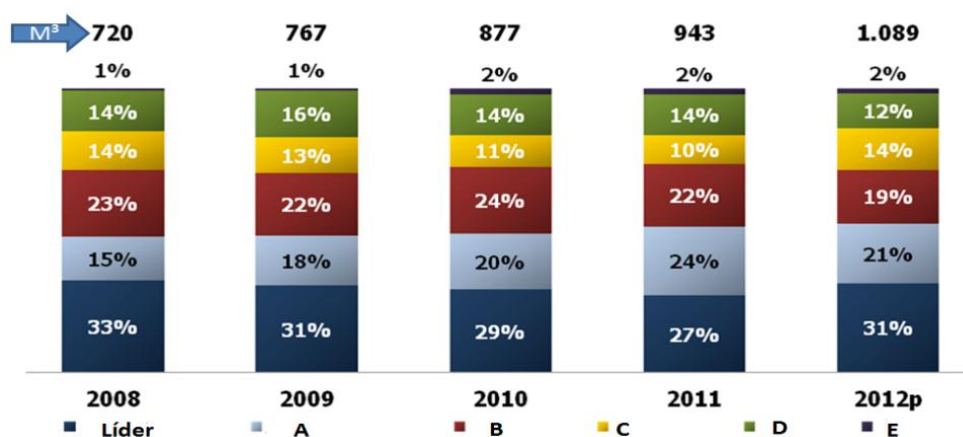
Picture 1: Interviews conducted during field research  
 Source: prepared by the authors based on survey data (2014).

The object of study were the bulk liquid terminal companies, and the name of each terminal was rated by leader (A, B, C, D, E) as shown in Picture 3. The choice of subjects illustrated in Picture 1 is justified for they are considered key-informants as they act on the market in the main terminal as business managers of bulk liquid terminals, whether in commercial, operational and support areas. Gil (2009) reports that these subjects are not necessarily the most typical people in relation to the group or organisation, but they are able to provide very detailed information about nuances of daily life and interpersonal relationships.

### 3.2 Search Universe

The universe of this research is constituted by six main bulk liquid terminals in the city of Santos-SP as shown in Picture 2, identified based on data presented at the ABTL (Brazilian Association of Bulk Liquids Terminals) site and information in the media and site of each terminal in July 2014.

In this universe, the leader terminals "A" and "B" were objects of this research, accounting for 77% of this market's capacity. However, terminals "C", "D" and "E" were not objects of this research as they did not concede interviews, due to internal policies. The terminals were classified accordingly to their static capacity as shown in Picture 2.



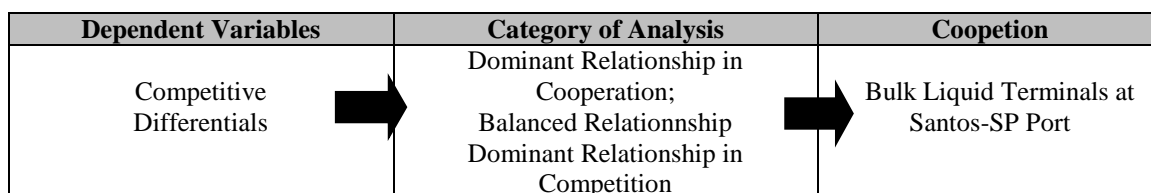
Picture 2: Capacity of bulk liquid terminals in thousands of m³  
 Source: prepared by the authors based on data from ABTL and Terminals (2014).

It can be observed in Picture 2, that it was considered as a market leader the terminal which remained on average capacity of 30% from 2008 to 2012, according to the ABTL classification and data obtained on the sites of the terminals. Thus, it was considered in this study only the leader and the terminals "A" and "B", which together, in the sum of static capacity, comprehend 77% of the bulk liquid terminal market.

This way, to meet the proposed goal, this research uses a qualitative exploratory approach. To Creswell (1998), this approach has the advantage of working with a variety of methods, as it has a holistic view of the phenomenon under study. The research method used was the case study that proposes to study the relationships between the variables of cause or effect (Yin, 2010).

The research instruments used were structured questionnaire consisting of multiple choice questions, direct observation and interview; both elaborated on the theory of Bengtsson & Kock (1999, 2000), which make up the three types of cooperative relationships. As it was also used direct observation by researchers through participation in meetings between bulk liquid terminals in Santos for a year. During the meetings the researchers observed the application of the theories of coopeition through the speeches, and strategic planning presented for the managers to decide. The strategic positioning of each bulk liquid terminal was later identified on the theory of Bengtsson & Kock (1999) and the predominant types of relationships between companies accordingly with Bengtsson & Kock studies (2000).

Regarding the technique, it was adopted the case study in order to perform a more extensive examination of the phenomenon, within natural environment, from multiple evidence sources (individuals, groups, organisations) employing various methods of collecting and analysing data (Yin, 2010). In the present work data collection was done by means of secondary sources as the websites of the companies. There were also used primary sources, through sixteen semi-structured interviews, all performed according to data collection protocol. The interviews were conducted personally by the authors.



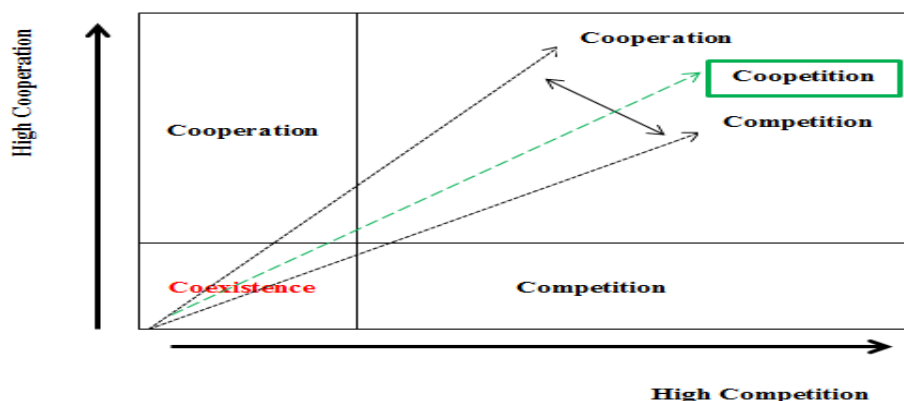
Picture 3: Theoretical Model of the Search

Source: Elaborated by the authors based on Bengtsson & Kock studies (2000).

The interviews were recorded and transcribed by means of content analysis, where there were three types of cooperative relationships proposed by Bengtsson & Kock (2000) shown in Picture 3. This technique, according to Bardin (1996), searches to describe through objective procedures the content of messages and generate indicators that allow the inference of knowledge relating to the conditions of production and reception of messages. To ensure reliability in the search results, the recorded data was heard three times, so that no relevant information was left out.

### 3.3 Proposal Analysis Model of Coopetition

Based on studies of Bengtsson & Kock (1999, 2000) it was elaborated a model of analysis to identify the types of relationships of the companies which are the focus of this study. Thus, through the first study, Picture 4 illustrates the model for strategic positioning of liquid terminal companies analysis (coexistence, cooperation, competition or coopeition) according to Bengtsson & Kock (1999).



Picture 4: Strategic positioning among competitors.

Source: Elaborated by authors based on the theory of Bengtsson & Kock (1999).

Later, with the identification of the strategic positioning of Picture 4, it was possible to identify the predominant type of relationship between companies (dominant relationship in cooperation, balanced relationship or dominant relationship in competition) according to Bengtsson & Kock (2000).

#### 4 ANALYSIS OF RESULTS

This research aimed to identify the types of cooperative relationships in the bulk liquid terminals according to Bengtsson & Kock theory (1999, 2000).

##### 4.1 Background of the companies

The description of the terminals is reported in a general way with information on infrastructure owed to the agreement with interviewees which guaranteed not to identify any persons, number of employees and company names. The terminals on which this study focuses were developed in Brazil and the Netherlands, operating in the bulk liquid terminal sector in Santos-SP for more than two decades.

The leader company is considered a pioneer in this segment, as it has capacity of approximately 301,000m<sup>3</sup> with 175 tanks of 50m<sup>3</sup> to 10,000m<sup>3</sup>. It has three berths, 17 pier lines. Its performance is with maritime, road and rail shipping. In addition to expansion of 40,000m<sup>3</sup> capacity of new tanks (Codesp, 2012; Tribuna, 2012).

In contrast, the company "A" declares publicly that has approximately 220,000m<sup>3</sup> composed of tanks of 1,000m<sup>3</sup> to 10,000m<sup>3</sup> with operations in maritime shipping with two berths for mooring. In the road transport, it has 12 loading and unloading bays where B-Train and Road Railler trucks operate. In addition to expansion of 83,000m<sup>3</sup> capacity of new tanks (Codesp, 2012; Tribuna, 2012).

Finally, the company "B" has 207,000m<sup>3</sup> composed of various tanks which operate special products as heated. This terminal is a branch of the carrier of oils and liquid or gaseous petrochemical terminals multinational and has prospects for expansion of over 14,000m<sup>3</sup> (Codesp, 2012; Tribuna, 2012).

The relationship between these three companies began more than two decades ago due to the terminals necessity to operate in the same geographical area, which is the city of Santos-SP, since there is no need for this segment to be close to the port of Santos to be able to provide services to maritime operations with import and export of liquid products. Thus, there are situations which simultaneous operations occur between terminals to meet their customers needs, according to the arrival or departure of vessels.

##### 4.2 Dependence of the companies due to the homogeneity of resources.

It was analysed the proposition of dependence on terminals due to the homogeneity of the resources of the operational area identified by the observation method, as independent of the terminal, the manpower that performs this work in the port does similar activities, using identical equipment and are in the same geographical space, a fact that creates situations where a team of a terminal merge, on execution of some task, with another competing terminal team, informally, to expedite the work in the port since each has a certain period to perform their operation, so if there is some delay, the other teams are impacted negatively with deadlines and even financial outlay.

The situation described authenticates the Martinelli & Sparks' claim (2003) which says that there is a relationship based on balanced synergy with the competition by focusing on mutual benefit, known as cooptation. Thus, the internal resources of the operational areas of the terminals get a relevance in the performance of delivery of service provision offered in the market as they perform the agreed service for the commercial area with customers. For Rumelt, Schendel & Teece (1991); McGahan & Porter (1997); Vasconcelos & Brito (2004), internal resources gets more importance than the external environment on the performance of an organisation.

In addition, the operational area reports through interviews that the terminals share some experiences, particularly those situations that require service inspection agents, such as CETESB, CUSTOMS, REGULATORY AGENCIES, where the isolated action would require time and resources. In the Occupational Safety area, respondents claim that there is currently a technical group (Integrated Emergency Plan - PIE) who meet monthly and discuss new technologies for emergency care, develop service and equipment providers in Labour Safety support.

For Porter (1985, 1991, 1996), the search for strategic alliances to survive in a competitive market is uninterrupted through infrastructure, sharing of physical goods and even labor, intangible assets, with the share of human capital, a fact that occurs between the terminals. For this matter, it is suggested the following proposition:

*Proposition 1:* The homogeneity of resources can promote cooperative relations and can be advantageous for both cooperation and competition.

In response, it is confirmed that there is homogeneity of resources, which is perceived between the operational and technical areas of the terminals in acting in partnership between the teams, which are competing companies, when there is a need to solve problems both in technical procedure occurred in import or export, as well as in bureaucratic situations occurring along the appropriate organs, for according to the method of observation and the obtained reports, it is noted that the terminals operating in a market with fierce competition, promote relations with cooperative advantages.

#### *4.3 Division between cooperation and competition due to the degree of proximity to customers.*

The bulk liquid terminal segment comprises a scenario with high competitiveness and is complemented by an aggravating factor, which is to serve the same customer than the competitors. By the method of direct observation, it was found that there are situations in which competitor terminals serve simultaneously for a specific customer, with or without the possibility to perform activities with even the same type of product, making an analysis possible to the customer, of the operational performance, commercial and even price of each terminal. Bengtsson & Kock (1999, 2000); Tiessen & Linton (2000); Leão (2004, 2005) argue that the competitive behaviour of companies are characterised by maximisation of individual earnings, as well as the way to act in confrontation and even withholding relevant information.

By the above, it is identified that there is a division between cooperation in the operational area and competition in the commercial area, due to the degree of proximity to customers, as there are times when competing terminals cooperate informally, as the following account: "There is informal help when there is idle capacity of the pier team of one of the terminals, helping the competing team in activity" (Operation).

On the other hand, there are situations where this occurs formally through (Integrated Emergency Plan - PIE), as reported below:

*The sharing of information/resources for emergency support, through PIE, for even when not activated, the brigades tend to help and the competition factor is forgotten, in order to minimise the risks of terminals (Support Area).*

The proximity degree of the terminals in Santos-SP creates, due to the need for service provision in the main port in Brazil, a need to share manual labour and information in providing service between competitors so it is possible to support customers. This fact then is characterised as a division of cooperation and competition, and, being so, it was analysed in this segment the following proposition:

*Proposition 2: The cooperative and competitive parts of a cooperative relationship are due to the geographical proximity, in which companies compete in activities with the client (outbound activities) and cooperate in activities away from the customers (inbound activities).*

In response, reports and observations demonstrate that due to the degree of proximity to customers, competitors operationally help themselves, even if it is characterised as an informal way, but a formal plan known as PIE (Integrated Emergency Plan) is also present. It was also noted that there is a clear division between cooperation in the operational area and competition in the commercial area. For Bengtsson & Kock (2000); Leão (2004, 2005) the prestige and pride of management influence competition and self overcoming of the companies, which causes dynamism in the industry.

#### *4.4 The market position of competitors influences cooperative relationships.*

The positioning of the bulk liquid terminal in a market with fierce competition is a key factor for survival in a segment with operations in the same geographical area (Bengtsson; Kock, 1999, 2000), which is the city of Santos-SP, seeing that, beside similarities in service providing, these companies also have customers in common and, moreover, there is an external factor, which influences directly in this strategic positioning, that is the bid, occurred due to the location of some terminals in port areas. It was verified through information from newspapers as the *Tribuna de Santos*, interviewees' reports and direct observation that it is possible to identify new competitors because market entry through purchase of an area, or winning a bid, are public, including the application for a licence by the terminals.

In this scenario, there is an influence on cooperative relationships because any differentiation strategy that a terminal applies to ensure fidelity, or at least, for the customer to stay for longer contract period, causes a tendency for the client to choose to continue with the current terminal or migrate to a competitor. Bengtsson & Kock (2003) point out that the competition influence companies to adopt conflicting actions to maintain the position in the industry. On the other hand, acting in a competitive manner only makes everyone lose out because it presents temporary short-term returns, making it difficult to maintain strategic competitiveness in the long term (Bengtsson & Kock, 1999, 2000; Garcia; Velasco, 2002; Leão 2004).

It also noted that this competitive relationship is perceived positively by the customers in finding that the terminals operate in formal and/or informal partnership to serve them in a moment of operational difficulty. Nalebuff & Bradenburger (1996) and Bengtsson & Kock (1999, 2000) state that the consolidation of cooperation with the competition is a concept addressed as co-competition. Therefore, it was examined through a report of a client in common between the terminals, which will not be identified due to the pre-established agreement of confidentiality, that more than one supplier in that port, even if they are competitors, transmit a safety over care of their demand in emergencies.

In the view of the commercial area of the terminals, this relationship was identified as a strategic risk to clients, when reporting that they check price and flexibility in excess of demand and change of scheduling. They complement stating that for the commercial area, customers value the company's reputation, which was built over time through commercial practices, mutual trust, history of good service on the integrity of the product and handling capacity at the time expected by the customer. Thus, the reputation and the size of each terminal is a competitive advantage, giving the impression of responsiveness when the client needs it. The statement of Hitt, Ireland & Hoskisson (2002) that the competitive strategies occur because of differences in resources, skills and expertise available among organisations corroborate with the practice of terminals, seeing that, it was examined the following proposition:

*Proposition 3:* The decision to cooperate or compete on a specific product or market area needs to be made with regard to the positions of all competitors and the connection between them, as a change in a relationship within the network can affect relationships and positions of the other competitors.

In response, it is understood then, through this analysis, that the terminal market is focused on clients that are in the competition, where the prospect to captivate them is directed to show a competitive differential, on price, infrastructure or even flexibility in operations for long-term contracts to be possible, but there are no signs of improvement actions in the current processes or even novelty in the provision of service to keep existing customers when characterising the market position of competitors influences cooperative relationships.

#### *4.5 Competition is traditionally defined as the conflicting relationship between competitors.*

The fierce competition between bulk liquid terminals makes cooperative relationship conflicting since it was observed that the internal procedures of each terminal are present possibilities of cooperation in common activities performed by the resources of the operational areas, which are not accepted formally by commercial areas. In this sense, respondents were asked about the possibility of acting in partnership between the terminals to meet the market demand with customers in common, to which the following reports were made: "It would be possible to share information between terminals, but this does not occur. An example of that would be to reduce costs in nitrogen purchasing" (Commercial). "We have to develop a company to collect the waste generated by the terminal at a lower cost, since all are obliged to do so, it is not carried out in the associations" (Operation).

In the exposed accounts, there is an internal conflict between the areas of the terminals, where there is a denial of the commercial area on the sharing of information and a simultaneous cooperative suggestion for improvement in purchasing a common product of the terminals which is nitrogen. To Bengtsson & Koch (2000) and Leão (2004, 2005) the consideration and the pride of the managers ahead of organisations influence the competition. Furthermore it can also be noted that there is the possibility of minimal cooperation with the solution of a problem exposed by the operating area to reduce costs, which characterises that the search for strategic alliances through sharing information and infrastructure is a relevant factor for survival in the market (Bengtsson & Kock, 2000; Porter, 1985, 1991, 1996). Therefore, we analysed the following proposition:

*Proposition 4:* The conflict between the logical cooperative and competitive interaction is internalised in organisations involved in cooperative relations and, hence, the acceptance of conflict and consensus on organisational objectives are management issues of great importance to the establishment and maintenance of a cooperative relationship.

In response, it was observed and found through the reports that the conflicting relationship between the competing terminals occur through the non-acceptance of the commercial area managers to cooperate due to strategic issues of each company in the renewal of contracts and pricing, but in this research, there can be seen situations of implicit cooperation in this area, as the following account: "The terminal market has strong competition, which drives prices down, due to wide availability of tanking. But even with this characteristic I feel that each customer and product need special treatment" (Commercial).

Moreover, the commercial area reported that: "In Santos all of the terminals are associated to ABTL and share handling information. Which helps to understand the product profile of changes and type of operation"



(Commercial). They do not share information from a commercial standpoint, but often under the operational aspect, including relationship with authorities (Commercial).

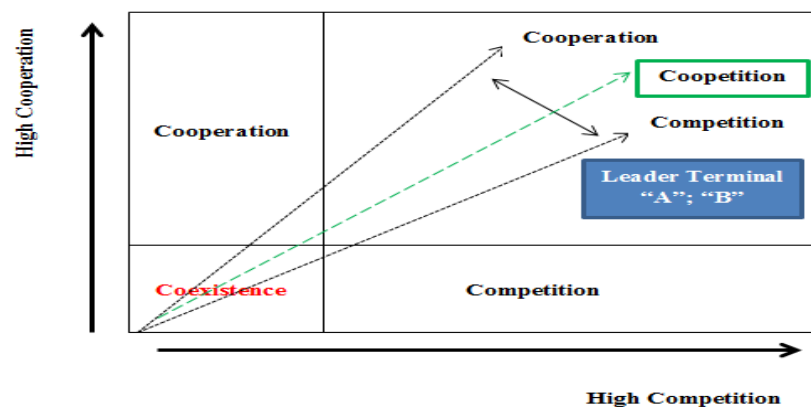
It is observed that despite the fierce competition, the terminals are part of a formal association recognised as ABTL (Brazilian Association of Bulk Liquid Terminals). It is also complemented with reports of cooperative conflicts, such as: "It would be possible to share information between terminals, but this does not occur. An example of that would be to reduce costs in nitrogen purchasing" (Commercial). "We have to develop a company to collect the waste generated by the terminal at a lower cost, since all are obliged to do so, it is not carried out in the associations" (Operation).

However, the operating areas, even if they are competitors, cooperate formally or informally, as the following report: "Aid is not formal and occurs when a customer is using two terminals at the same time" (Operation).

These reports clearly present the proposition 4 through conflicts between the cooperative and competitive logics that are internalised in the terminals in cooperative relations, because with the acceptance of conflict it is an important management issue for it to be possible to establish and maintain a cooperative relationship between managers of each terminal.

#### 4.7 Strategic Positioning of companies

Based on the analysis of propositions (1, 2, 3 and 4) it was possible to identify the strategic positioning of liquid products terminals as shown in Picture 5 with the realisation that in this market, the leader terminals "A" and "B" work with high competition and low cooperation, characterising the type of cooperation relationship as it contemplates cooperation and competition, which for Bengtsson & Kock (1999) includes economic and non-economic exchanges and the power of the cooperative relationship is based on the functional aspects according to the value chain.



Picture 5: Strategic positioning of liquids terminal in Santos.  
 Source: Elaborated by the authors based on the theory of Bengtsson & Kock (1999).

In the case of terminals, non-economic exchanges are observed in the functional aspects of the value chain with the informal assistance carried out by teams of operating terminal competitors, but this is due to the need to meet the negotiation that the commercial area offers the customer, in other words, it is complemented by the economic exchanges, as there is an aim to secure the contract that generates financial value to the terminal. Thus, there is not in this segment the coexistence that for Bengtsson & Kock (1999) the relationship does not include any economic exchange, only information and social exchange.

The analysis is complemented with the reports of respondents and direct observation in the meetings that underlie the claim of Bengtsson & Kock (1999, 2000); Garcia & Velasco (2002) and Leão (2004, 2005) that acting completely as rivals, makes that the competition tends to be negative, since everyone is worse off. This fact can be noticed when terminal managing cite examples such as: purchase of nitrogen, which is a raw material for the common set of terminals for better negotiation with suppliers or even hiring a single company to collect waste of all the terminals. These are situations that would enable a possible cost reduction, but as there is no agreement between the terminals, everyone is worse off.

On the other hand, the competition is clearly stated by interviewees including external factors threatening the strategic positioning of the terminals, such as the fact that they all directly compete for a bigger slice of the market




and it is clear the intention of growing of some terminals vying for bid from another terminal, a fact that was reported by the managers of the terminals, on the newspaper Tribuna. Besides the possibility of bidding, it was observed that there are some terminals that are expanding their capacity for better strategic positioning.

It was identified by means of the reports and direct observation that strategic positioning is considered a relevant factor for survival of terminals in this market, since besides the development that occurs in internal procedures, which for Rumelt, Schendel, & Teece (1991); Mcgahan; Porter (1997); Vasconcelos and Brito (2004) these resources gets more importance than the external environment on the performance of an organisation. Furthermore, this research also needs attention to external factors such as the case of bids for port areas, cited by respondents, as the terminals seek to differentiate themselves in the market with more sustainable competitive advantage than others, that is, it is an *outlier*, which deserves to be considered in a particular way (Bengtsson & Kock, 1999, 2000; Santos & Hexsel, 2005).

Through the above in the interviewees' reports, the strategic positioning of the bulk liquid terminal has a sector with strong competition, sensitive to price, dependency on tank capacity and uncertainties about the external factors, such as the example given on the bids. Another important fact is that the terminal leader is in danger of being overtaken by the terminal "A", characterising the relevance of strategic positioning in this market. Thus, based on Bengtsson & Kock (1999), as explained in Picture 5, the model for analysis of the liquid terminal companies' strategic positioning is cooperation, with high competition and low cooperation.

#### 4.6 Analysis of Types of Relationships between Companies

In addition to the analysis of strategic positioning, the types of relationships between bulk liquid terminals were identified as shown in Picture 6.

Type of Relationship	Companies
 Dominant Relationship in Cooperation	The cooperation occurs with low intensity and informally at ABTL, only between operational areas
 Balanced Relationship	There is no balance, as the competition intensity prevails
 Dominant Relationship in Competition	<b>Leader terminal; Terminal "A" e "B".</b>

Picture 6: Types of relationships between the companies  
 Source: Elaborated by the authors based on the theory of Bengtsson & Kock (2000).

Based on the theory of Bengtsson & Kock (2000) it was possible to identify the degree or level cooperation according to the intensity of cooperation and competition developed between companies shown in Picture 6. Therefore, when analysing the dominant relationship in cooperation consisted in more cooperation than competition, the theory does not corroborate the practice, since cooperation occurs informally with low intensity, not recognised and not accepted by areas of the same terminal, which causes conflicts with managers of commercial areas versus the managers of the operational areas. In this sense, the balanced relationship also does not corroborate the theory, as it is noted that the competitive relationship between the terminals presents itself more vehemently to ensure the survival and strategic positioning in this market.

In this context, the leading terminals "A" and "B" are characterised as "dominant relationship in competition" because it was realised by the research findings, that there is greater intensity of competition. On the other hand, there is a low-intensity cooperation with the formal participation of the terminals at the Brazilian Association of Bulk Liquid Terminals (ABTL) and even informal cooperation between the operational areas. This scenario in the view of Bengtsson & Kock (2000) characterises the concept of the terminals cooperation which is cooperate with competitors.

It was observed that the high intensity competition is due to the actions of terminals that focus on price, in the case of penetration of large customers, through a strategic way of competitors to aggregate value to the customer in services that other competitors cannot or do not know how to offer, at least in short term.

Another reason was analysed through the reports of the managers of the commercial area when stated that it is possible to identify new competitors because the entry requires the purchase of an area or the winning of a bid,

facts that are public including because of the licence request. Finally, with the expansions underway at the Port of Santos-SP, which already identify two new entrants that have already been announced with the construction of storage tanks for liquid bulk that because they are not current competitors in this segment, offer risk when they represent a very aggressive competition to existing terminals.

The proof of the above information was analysed by the managers about the action of the federal government through the Special Secretariat of Ports that is working on a new regulatory framework for the Brazilian ports, which can change the current bidding model of current areas in the bulk liquid terminal sector. According to the managers, in 2012 there was a public bidding of an area of a competitor that has operated for over 30 years, and lost to a new entrant which has a terminal in another region, although there is a legal battle in progress which prevented the new entrant to take responsibility for the area.

In short, the terminals report that the management of competition is aggressive, focusing on increasing market share, with pricing strategy, operational flexibility, differentiated warehousing and, mainly, increased capacity through expansion, new constructions or even bidding.

In this context, based on the models of Bengtsson & Kock (1999, 2000) the bulk liquid terminals act with cooperative positioning and dominant relationship in competition.

## 5 FINAL CONSIDERATIONS

Competitive strategy in business networks is a central theme in the market positioning through internal and external resources when considering that these are relevant in the performance of an organisation (Porter 1985, 1991, 1996; Rumelt, Schendel, & Teece 1991; McGahan & Porter, 1997; Vasconcelos & Brito, 2004). The aim in this research was to identify the strategic positioning of the companies in bulk liquid terminals based on studies of Bengtsson & Kock (1999) and identify the types of cooperative relationships based on studies of Bengtsson & Kock (2000).

In response to the proposed objective, the terminals were analysed and it was found that due to the fierce competition there is precision in competitive advantages increase in providing services that are similar and in the same geographic space, a fact that is due to the need of the terminals to survive in the market and meet the demands of customers through strategic positioning with low cooperation on joint activities, even if they are competitors, consolidating the concept of cooperation (Brandenburger & Nalebuff, 1996; Castells, 1999; Bengtsson & Kock 1999; Bengtsson & Kock, 2000; M'chirgui, 2005).

In this context, the cooperation theory confirms the reality of the terminals, but with different degree of intensity between cooperate and compete, for the strategic positioning of the companies related to the studies of Bengtsson & Kock (1999) concentrate with high competition and low cooperation. Thus, the types of relationships touted in the theory of Bengtsson & Kock (2000), in this study was the dominant relationship in competition. Thus, the four theoretical propositions were confirmed, presented as follows:

*Proposition 1:* The homogeneity of resources can promote cooperative relations and can be advantageous for both cooperation and competition. This proposition was confirmed because the homogeneity of resources was perceived between operational and technical areas of the terminals and in the acting in partnership between the teams, which are from competing companies, to solving problems in the technical and operational bureaucratic processes in maritime operations with import and export.

*Proposition 2:* The cooperative and competitive parts of a cooperative relationship are due to the geographical proximity, in which companies compete in activities with customers (outbound activities) and cooperate in activities away from the customers (inbound activities). This proposition was confirmed because competitors act informally and formally in operational partnership through PIE, featuring the division between cooperation in the operational area and competition in the commercial area, in the same geographical area, which is the port of Santos-SP.

*Proposition 3:* The decision to cooperate or compete on a specific product or market area needs to be made regarding the positions of all competitors and the connection between them, as a change in a relationship within the network can affect relationships and positions of the other competitors. In response, it is understood then, through this analysis, that the terminal market is focused on clients that are the competition's, where the prospect to captivate them this directed to show a competitive advantage.

*Proposition 4:* The conflict between the cooperative and competitive interaction logic is internalised in organisations involved in cooperative relations, and hence the acceptance of conflict and consensus on

organisational objectives are management issues of great importance to the establishment and maintenance of a cooperative relationship. This proposition was confirmed by the conflicts between the cooperative and competitive logics, which was identified by the conflicting relationships between competing terminals, occurred through the non-acceptance of the commercial area managers in cooperating.

Thus, based on studies of Bengtsson & Kock (1999), the four propositions identified that the strategic positioning of the leader terminals "A" and "B" are in a market with high competition and low cooperation, being characterised in the type of cooperative relationship that includes economic and non-economic exchanges and the power of the cooperative relationship is based on the functional aspects, according to the value chain. In contrast, the theoretical model of Bengtsson & Kock (2000) can identify that the bulk liquid terminals have no dominant relationship in cooperation because the intensity is low and informal, occurring only between operational areas so if a balanced relationship is mischaracterised, as the intensity of competition prevails, so the kind of relationship that confirms the reality of terminal leader; Terminal "A" and "B" is the dominant in the competition.

By the above, as a possibility for future studies, it is recommended that the application of theoretical models of Bengtsson & Kock (1999, 2000) be replicated with their respective restrictions under each geographical location in other ports and/or other areas aiming to add value to the theory in academia. As search restriction, the results obtained through methods of observation, interviews and analysis of documents referent to a specific market, as in the case of bulk liquids terminal in Santos in order also to contribute to research on cooperation.

As a contribution there is the possibility of using the concepts and findings outlined in this study as possible sources of research so organisations can assess the competitive advantages through cooperation. It is important to remember that cooperation is a broader concept and can suit the present to contribute to the Scientific Academy, as the empirical research corroborated the theory in the market for bulk liquid terminals in Santos.

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