

Container Terminals Collaboration: The Case Of National Container Terminals Of Egypt

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ABSTRACT: The benefits of collaborating can be classified into efficiency / cost reduction, knowledge and competency, positioning of the terminal, as well as marketing and service benefits. This study investigates the horizontal collaboration initiatives of container terminals, the case the three National Container Terminals of Egypt. It also examines how collaboration initiative can be managed effectively.

At first a literature review has been conducted. Secondly, an in-depth case study based on semi-structured interviews with managers from the three National Container Terminals of Alexandria, Port Said and Damietta have been carried out. Both (literature and case study) have been compared and discussed.

This paper shows that terminals may collaborate in the field of marketing and business development, operations, administrative and regulatory. It also handles joint purchasing, joint coordination of operational sequences and consulting, as additional activities.

This study provides useful

strategies and recommendation for decision makers in three National Container Terminals of Egypt. It also, makes several contributions to the limited available literature of horizontal collaboration in the container terminal industry.

Keywords: Horizontal collaboration, Co-option, Container terminals collaboration

1. INTRODUCTION

Today, ports cannot maintain a monopoly status as in the past. Many changes and several trends, such the growth of shipping alliances, the growing numbers of mega container ship, and overcapacity in the supply side leads to severe competition among ports and terminals in Egypt and East Mediterranean region. To comply with such increasing competition phenomena, ports and terminals are forced to apply new strategies. One approach to stay competitive in such business environment is the implementation of collaborative initiatives between ports and terminals. By collaborating, ports, can gain benefits that cannot be obtained in standalone basis.

With regard to National Container Terminals of Egypt (NCTE), the good news come from the ownership structure of these container terminals. They are running under to the same umbrella which is the "Holding company for maritime and land transport" (HCMLT). This key factor can greatly facilitate the implementation of proposed collaboration initiatives and achieve a competitive advantage using its unique ownership structure.

1.1. Research objectives

The main objective of this research is to investigate the horizon of collaboration between the National Container Terminals of Egypt (NCTE). This includes the identification of drivers for collaboration as well as potential benefits, and barriers. Finally, to search how to manage such collaboration initiatives effectively.

1.2. Research questions

With refers to the NCTE, the research questions are:

- What are the collaboration initiatives currently applied in the port and terminal industry?
- What are the drivers for collaboration initiatives?
- What are the main barriers that hinder application of the collaborative initiatives?
- How to effectively manage the collaboration initiatives?

2. LITERATURE REVIEW

2.1 Concept of collaboration

The definition of UNCDAT describes collaboration as "joint activities carried out by at least two parties who are mutually committed, and gain benefits from the co-operation such as financial savings, improvements in quality of services, increased market share, etc..".

According to Daugherty et al. "collaboration involves two or more independent companies working together to jointly achieve greater success ". This definition is clearly focused on the objective, which is supposed to be a "greater success".

2.2 Forms of collaboration

Basically, there are two forms of collaboration; vertical and horizontal. Beside the vertical and horizontal form, Sitatunga and Sridharan (2002) defined the lateral form of collaboration.

In a supply chain context, the vertical type includes collaboration with customers and suppliers. Vertical collaboration within the port industry mainly deals with supply chain integration of ports and includes activities like integration between transport modes, providing value added services, information technology systems, strengthen the relationship with maritime shipping

companies, and inland transport service providers (Song and Panayides, 2008) as well as providing dedicated terminals to shippers (Bichou and Gray, 2005).

The horizontal form of collaboration is a relationship between competitors, non- competitors or internal departments or business units. The lateral form of collaboration is a combination of the horizontal and vertical form and mainly aims "to gain more flexibility by combining and sharing capabilities".

2.3 Horizontal collaboration in the maritime industry

There are two types of port co-operation which are: complementary co-operation and co-opetition. Hwang and Chiang (2010) explain that "complementary co-operation existed when a port needs another port(s). Relationships between hub and spoke ports are one example mentioned by Yap and Lam (2004).

Co-opetition can be defined as a mixture of cooperation and competition. Co-opetition is a strategic approach for organizations in the same market to reach a win-win situation and strengthen each other against outsiders. Researches in this area confirms that there is a positive correlation of the level of co-opetitive relationships and the ability to remain competitive. Co-opetition based on the theory, that beside the group of suppliers, customers and competitors, there is another group interacting in business which can be called "complementors" (Brandenburger and Nalebuff, 1996). So, complementor as a player whose products or services are complementary to the company's production".

2.4 Collaboration initiatives:

UNCDAT (1996), stated that collaboration initiatives like exchange of know-how, standardization of statistics and tariffs, training, and participation in the activities of regional and international port associations are quite often. These findings are also cope with Brooks et al. (2011) who mentioned 21 initiatives of port collaboration in more than 70 ports worldwide. Ports located in the same geographical region often apply initiatives include joint regional marketing and joint development of infrastructure. Common collaboration practices for ports located far from each other are technical co-operation, sharing of information on port development,

joint training, and common positions at international fora. Song (2004) claimed that collaboration in the way of co-opetition is a new concept in the port industry. Scholars divide collaboration initiatives to formal and informal. Formal collaboration based on written contracts, while, Informal collaborations are usually a react to a specific situation. As per Brooks et al. (2011), The categories of collaboration initiatives are: Administrative, regulatory, operations, marketing and business development. This research uses these categories as a basic overview of initiatives.

2.5 Drivers and benefits

A driver can be considered as a reason of why ports participate in collaboration initiatives. Song (2004) summarized co-opetition reasons in five different categories, namely strategic, economic, financial, operational, and marketing motivations. The results show that strategic motivations, which relate to port's market position, are the main reasons for co-opetition.

Shipping lines practice big pressures on container terminals. The fierce competition in the shipping market leads to confirmation of shipping alliances which have a strong bargaining power on ports and terminal operators. Alliances of shipping lines are jointly negotiating with ports for lower prices and better conditions. Losing one alliance, often results in a big loss of sales and revenues. Also, the penetration of shipping lines in terminal operations business strengthened their market power against common terminals. As a reaction, container ports are forced to provide high level quality services by all possible means including collaborating with other ports".

Furthermore, Song (2003) mentioned that increased ship size is influencing the competition of ports. Due to draft limits of most ports, only few ports are able to accommodate and efficiently operate such mega container ships. Technological development of port facilities is another driver for collaboration. These factors are the main reasons for ports collaboration. Ports should react by forming "alliances with their competitors as a co-operative strategy".

Brooks et al. (2011) identified the following benefits of port co-operation: (1) Better use of assets in terms of efficiency, scale and scope; (2) Increase competencies; and (3) Gain positional advantages.

Efficiency / cost reduction

These benefits are gained in the form of financial performance, stability and efficiency. The benefits of economies of scale and scope achieved through capacity utilization as identified by several authors in the port literature.

Knowledge and competency

As a result of knowledge transfer and the leverage of complementary skills and operational procedures performance can be improved (Song, 2004). Ports may complement one another's competitive advantage and thereby help to increase performance".

Positioning of the company

In order to reshape their position in the market, terminal operators can apply co-operative strategy as a useful option. Song (2004) states that not only expansion but also maintaining market shares is a benefit of collaboration.

Marketing and service

Joint marketing and promotion activities could lead to increase in traffic for the whole collaboration members. Within marketing category, Song (2004) mentioned the area of benefits in terms of customer services and improving service-quality.

2.6 Barriers

Co-operation based on market forces does not necessarily mean limited competition. In reality when ports collaborate "to create a common tariff-structure, this does not mean that they will apply the same prices or commercial attitude towards shipping lines". Ports can collaborate in some areas while compete in other areas. There is no possibility for ports to collaborate in all areas. Every port has its own routes, cargoes, decision makers and customers. UNCDAT (1996) mentioned different economic interests and commercial attitude as a barrier of collaboration of ports in different countries.

2.7 Determining and dividing the gains

Costs and gains from the collaboration initiatives should to be fairly shared. Many initiatives have been failed due to mistrust and a lack of fair specified rules of sharing the gains. Having clear and transparent fair rules are important and a sharing mechanism is necessary for a fair distribution of gains.

Negotiations between the partners should always result in a win-win situation. A positive approach to negotiations will have a positive impact to the collaboration initiative. Stressed negotiations would lead to a negative relationship.

2.8 Effective management of collaboration initiatives

There are four groups of horizontal relationships, namely information sharing, incentive alignment, relationship management, and information & communication technology.

Information sharing

Without proper sharing of information, collaborating parties will lack plans and consequently the initiative will not be managed well.

Incentive alignment

It is important that all parties are willing to share costs, risks and benefits, in order to achieve common goals.

Relationship management and contracts

Verstrepen et al. (2009) identified best practices for a successful collaboration in terms of relationship management which are regular face to face meetings, writing a record of each meeting and sending it to all partners, also differentiate between conflicts concerning strategic, operational, financial issues (hard conflicts), and conflicts concerning interpersonal or business cultural aspects (soft conflicts).

Many argue that a more open contract fits better to collaboration initiatives, as such initiatives mainly base on unpredictable future conditions which cannot be captured by a contract. That the most successful collaboration initiatives are based on a simple contract outlining only the basics. Nothing more is required if the parties are truly committed to each other. Capturing all detailed agreements with a contract may have a negative effect in practice and can lead to problems.

Information technology

As already mentioned, information sharing is crucial for the success of a collaboration initiative. To ensure information sharing, efficient communication must exist between both partners. Thus, contribute to a successful collaboration.

3. RESEARCH METHODOLOGY

Due to the clearly qualitative nature of the topic, the study is mainly based on the "mono method" and data are collected using the qualitative procedure. Anyhow, in order to reduce the "method effect", a simplified quantitative analysis procedure called "content analysis" has been applied.

3.1 Data collection

For this study, primary and secondary data have been used.

3.2.1. Secondary data

The secondary data is "data that have already been collected for other purpose". In this paper, secondary data have been used for both, the literature review and the practical part of this research. The literature review is a proper part of a study and helps to answer the research questions.

This study basically uses company information, consulting reports and research studies to collect secondary data, in addition many other sources i.e., Internet databases have been scanned in order to find appropriate journal articles and papers.

3.2.2. Primary data

Primary data can be defined as new data, which is collected for the research propose. Several collecting methods can be used in case studies, including interviews, observation and document analysis. The primary data collection method used in this study are interviews.

Interviews

Saunders, Thornhill and Lewis (2009) distinguished interviews into structured, semi-structured and unstructured interviews. This study uses semi-structured interviews. The researcher takes a guideline of questions and topics to be covered, While the detailed questions vary from interview to interview. According to the flow of the conversation some questions may be skipped and others may be added. This form of interview has been carefully chosen to generate qualitative data and therefore fits into the qualitative case study approach of this study.

3.3 Sampling procedure

Managers from the three NCTE companies as well as from Holding Company for Maritime and Land Transport (HCMLT) in addition to some industry's expertise from shipping lines and port authority have been interviewed and classified. Those managers represent main departments of each company, namely: (1) top management, (2) operations, (3) engineering, (4) marketing, and (5)

research & development. In addition to outsider experts. The researcher plan was to conduct 20 interviews 5 from each company of NCTE and 5 from outsider. The actual interviews reduced to 12.

3.4 Data analysis

The interviews have been transcribed and summarized in order to present a condensed overview for further analysis. The next step was to break down the interview data into categories to facilitate the analysis process. To bring all findings of the interviews together, a simplified form of content-analysis has been applied. In a following analysis, the research findings have been compared with the findings of the literature review to answer the research questions.

3.5 Research reliability

According to Saunders, Thornhill and Lewis (2009) reliability is proved when the same research project, conducted by another researchers results in nearly the same outcome. To avoid threats related to participant bias, anonymity has been guaranteed to each participant. Furthermore, each transcript has been sent to the participant for content-check. To overcome the information bias, secondary data such as organizational publications and reports have been used to reinforce and confirm the data provided from the interviews.

3.6 Research Validity

Biggam, (2008) states that research is valid when it is "acceptable to the research community". This research can be claimed as valid as it is based on data collection methods and analysis procedures that are carefully evaluated and chosen to be appropriate to this research. In addition, secondary data (company reports, consulting reports, scientific papers and press-releases) are used to complement the primary data and to foster the validity as well.

3.7 Research limitations

The main limitation of this study is the distinction of NCTE ownership structure. Also, the literature and the findings of the field research have been collected and analyzed qualitatively. Only a simplified form of content analysis has been applied to quantify data from the interviews.

4. CONTENT ANALYSIS

This section puts together the findings of the interviews. The interviews are analyzed using content analysis to quantify the findings. To use content analysis in a constructive way, it is necessary to create categories. Thus, the categories already created in the literature review have been used. The findings for each research subject are quantified and ranked.

4.1 Initiatives

NCTE companies used to cooperate in the area of development studies and market researches. Such activities usually coordinated by the principal HCMLT. Knowledge transfer is also a common practice between NCTE members, but it still needs more and needs to be executed in a systematic and more coordinated manner.

Until now, collaboration initiatives in terms of joint advertising and promotional activities are not exist. The three NCTE companies usually represents themselves as different organization at international exhibitions i.e., Marlog conference and exhibition organized by AASTMT. With regard to public relations the collaborative joint ventures are practiced occasionally, through the principal organization HCMLT.

The exchange of know-how is common collaboration practice between NCTE members, but it needs to be more organized and more systematic i.e., Applied Information systems. NCTE, in case of emergency, cooperate in the area of spare parts for different terminal equipment. One NCTE member can borrow or purchase a spare part until the ordered one arrive from foreigner supplier.

NCTE are part of what so called "Integration platform" which is a cooperation initiative to support and facilitate transactions between all companies under the umbrella of HCMLT; It gives the priorities and preference for

transactions between these sister companies in their different business field, as per many of conducted interviews this initiative does not applied in a large scale due to many reasons out of this research scope. The three interviewees mentioned that common terminal development is mainly conducted to reduce cost and prevent duplication i.e., ERP System or TOS.

As a conclusion: NCTE already work together during the previous years, but in tight scale. they are still in an early stage of collaboration.

4.2. Drivers and benefits

Maintaining and extending the market position have been mentioned in all interviews as drivers. Nearly, most interviewee from NCTE members stated that the main reasons for conducting collaboration initiatives are the increasing competition and achieving more cargo volume. 8 out of 12 interviewees mentioned that collaboration could increase efficiency and utilization and therefore achieve more cargo volumes, while increased competition was mentioned by 10 interviewees. In most cases, it was not possible to separate the drivers from the benefits as the motivation are mainly of a beneficial nature. Companies collaborate in order to get the benefits like cost-reduction, improving competition position, joint protection of interests etc.

Cost reduction is ranked on the third position. Cost saving could be reached through economies of scale when jointly purchasing and jointly plan and conduct exhibitions presences (Interviews no. 1, 3, 4 and 6, 9, 10 and 11)

According to them, the benefit is more intangible i.e., improving competition position. Maintaining and increasing the market share can be treated as overall benefit as well. All interviewees mentioned this benefit. In addition, improving the market position is the major driver. Also reduce spare parts inventory.

Improving the service quality for customers have been mentioned four times mentioned in four interviews. From the analysis, service quality improvement can be reached by coordinating the operational and commercial activities.

In addition, knowledge transfer of market developments helps to adjust the service according to the needs of the

customers. The majority of the respondents focused on benefits from a business and economic viewpoint.

4.3. Barriers

The willingness to collaborate has been mentioned many times, but the reasons behind collaboration come from different point of views. Three interviewees reported that many terminal operators are still working on internal improvements. According to one interviewee, the companies should start to see NCTE as one unit, where joint actions are more productive. The reason of unwillingness to collaborate is of more social nature. According to a managing director, sometimes there are interpersonal differences, which prevent working together. In addition, three interviewees did not see any barrier. Further barriers that have been mentioned are the special nature of each terminal, cargo composition i.e., transshipment/ local cargo, different interests (Interview no. 3, 4,7, 9, and 10), missing trust, lack of transparency. unwillingness to collaborate, missing rules and missing deadlines. In addition, the barriers of determining and dividing the gains, and negotiation have not been confirmed.

4.4 Effective Management

Most interviewees stated that information sharing and regular face to face meetings are the most important factor for effective collaboration process. Also, trust and transparency has been mentioned as an important facilitator as per interview no. 2, 4, 5, 9 and 12. It can be noted that NCTE follow a softer form of collaboration, where only oral agreements or principal (HCMLT) instructions have been made.

There was a proposal to form a cooperation team or a joint coordination committee to overcome problems which have their nature in different management styles Interview no. (5). Finally, the willingness to collaborate has been mentioned as a facilitator. Interviewee no. (1) stressed on the importance of leaving "old" pattern of thought of improving only internal performance and approach a more collective thinking.

5. CONCLUSION AND RECOMMENDATION

This part concludes the research by bringing together all the work; the findings of the literature review, the findings

of the interviews and the findings of the comparison. The conclusion addresses all research questions. In addition, the researcher provides suggestions for colleagues who might wish to undertake future research in this area.

5.1. Summary of findings and results

There are some collaborative practices between the NCTE "in Damietta, Alexandria and Port Said". Both, the literature as well as this field study found many different initiatives which fit into the categories of marketing and business development, operations, administrative, and regulatory. Strong evidence of collaboration in the field of joint advertising and promotional activities has been found in this field research. Other interesting findings are the initiatives which have been mentioned rarely in the literature: Consulting, joint purchasing and joint coordination of operational sequences. Moreover, both sources indicate that collaboration between terminals is relatively a recent trend.

For the second research question about "drivers of the collaboration initiatives", the major driver is the increased competition. Other drivers are the bargaining power of shipping lines, increased efficiency in the maritime industry, larger ship size, technological development and increased

requirements of shippers and shipping lines. Furthermore, the drivers "increasing amount of cargo volume".

The benefits that have been found in literature and have been confirmed in the interviews can be classified in the sections: efficiency / cost reduction, knowledge and competency, positioning of the company, and marketing & service benefits. Positioning the company in terms of market share has been strongly proved by the results of the field research. In addition, the benefit of cost reduction has been highlighted by the case study as an important benefit as also mentioned in the literature.

The third question regarding the main barriers: differences in management style and believes, missing trust, and different interests has been emphasized. differences of interaction between senior management, the unwillingness to collaborate, missing rules and missing time deadlines. Apart from that, the barriers of determining and dividing the gains, and negotiation have not been confirmed.

The last research question is about the effective management of collaboration initiatives. The most important three factors are: regular face to face meetings, information sharing and trust. In addition, this study has found that clear rules greatly facilitate collaboration initiatives, which are based on integration and merger activities like joint ventures, whereas "soft" agreements are more adequate for the remaining types of relationships. Moreover: The willingness to collaborate by leaving "old" pattern of thought.

At the end, the research questions have been answered theoretically by the literature review, also these questions answered by the case study of (NCTE) and by comparing both. It can be concluded that the overall findings of the literature are similar to the findings of the case study. Only some issues have not been confirmed i.e., environmental issues. In addition, the field research generated additional data to extend the academic literature of horizontal collaboration initiatives in the container terminal industry.

5.2 Recommendations:

- A port cannot maintain a monopoly status as in the past; One approach to stay competitive in such business environment is the implementation of collaborative initiatives between ports and terminals.
- The increasing bargaining power of shipping line alliances is increasing; Ports should react by forming "alliances with their competitors as a co-operative strategy".
 - Benefits of port co-operation: (1) Better use of assets in terms of efficiency, scale and scope; (2) Increase competencies; and (3) Gain positional advantages.
 - National Container Terminals of Egypt (NCTE) are running under one umbrella (HCMLT). This unique ownership structure can greatly facilitate more strategic, economic, financial, operational, and marketing collaboration initiatives and achieve a competitive advantage.
 - Ports may complement one another's competitive advantage and thereby help to increase performance".
 - Joint marketing and promotion activities could lead to increase in traffic for the whole collaboration members.

- Ports can collaborate in some areas while compete in other areas. There is no possibility for ports to collaborate in all areas. Every port has its own routes, cargoes, decision makers and customers.
- Having clear and transparent fair rules are important and a sharing mechanism is necessary for a fair distribution of gains.
- Negotiations between the partners should always result in a win-win situation. A positive approach to negotiations will have a positive impact to the collaboration initiative. Stressed negotiations would lead to a negative relationship.
- Without proper sharing of information, collaborating parties will lack plans and consequently the initiative will not be managed well.
- It is important that all parties are willing to share costs, risks and benefits, in order to achieve common goals.
- Best practices for a successful collaboration in terms of relationship management are regular face to face meetings, writing a record of each meeting and sending it to all partners.
- It is important to differentiate between conflicts concerning strategic, operational, financial issues (hard conflicts), and conflicts concerning interpersonal or business cultural aspects (soft conflicts).
- The most successful collaboration initiatives are based on a simple agreement outlining only the basics. Nothing more is required if the parties are truly committed to each other. Capturing all detailed agreements within a contract may have a negative effect in practice and can lead to problems.
- There is a proposal to form a cooperation team or a joint coordination committee to overcome problems.

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5.3. Further research opportunities:

The literature and the findings of this case study (NCTE) have been collected and analyzed qualitatively. Therefore, further research should concentrate on quantitative research methods and assess the findings statistically.

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