Implementing public-private partnerships:
The case of French Port Authorities

Charles H. Fredouet
Laboratoire I.C.I., Universite de Bretagne Occidentale
fredouet@univ-brest.fr

Frank Guerin
ISEL, Universite du Havre
frank.guerin@univ-lehavre.fr

Olivier Desplebin
IAE, Universite de Rouen
olivier.desplebin@univ-rouen.fr

Abstract:

Shippers' frequent re-designs of their transportation networks directly impact the relative strength of the positions held by ports in these networks.

Therefore, Port Authorities need to adjust their investment/cooperation strategies, often using public-private partnerships.

The purpose of this paper is to contribute to the analysis of the motivations, implementation and evaluation of such partnerships.

The methodology is case-based and fully qualitative, both for data collection and for data processing.

Three main motivations have been identified: the enhancement of port competitiveness, the search for better competencies, and the reinforcement of financial capacities. Implementation features a standard activity split between partners, but proves to be rather context-specific on some other aspects. Evaluation is made through three main criteria: the good quality of partners' competencies, the actual gains made on partners' performance criteria, and the actors' willingness to collaborate towards the improvement of the port's competitiveness.

Keywords:
Public-private partnerships, port authorities, port strategy, port competitiveness, infrastructure, investment, cooperation.
INTRODUCTION

As they compete fiercely against one another, companies are constantly trying to improve their performance, including through supply chain re-designs which are specifically affecting freight transportation routes, thus possibly leading to a reduction of the number of ports of call.

In order to keep their place in present logistics networks and earn new ones in other chains, ports must therefore optimize their processes for allocating resources to the activities they are trusted with.

More specifically, one of the predominant orientations of Port Authorities (PAs)’ strategy consists in setting up partnerships with the purpose of combining the partners’ financial and operational resources for the most efficient service of the supply chains they are (or would like to be) part of.

Standing out as one of the possible frames for this collective approach of port strategy making, public-private partnerships (PPPs) have drawn the attention of French ports, where various instances of their implementation can be found.

Historically, the evolution of French port communities has been driven by the trade networks supporting the local economy. The French Revolution has launched an extensive centralization movement, leading to a situation where, at the beginning of the XXth century, port matters were handled by no less than five different federal government departments.

Considering the inefficiency of such an organization, lawmakers have set up two successive (1920, 1965) legislative frames to improve the autonomy of ports, especially through the creation of Port Authorities. The core purpose of these public institutions is to organize local economic development in coherence with corresponding national policies, in a drive for a more efficient coordination between local needs and national priorities.

The present missions of Port Authorities relate to traffic management (e.g.: provide safe vessel access), area management (e.g.: improve environmental quality), customer management (e.g.: attract new customers) and stakeholder management (e.g.: build up partnerships to operate activities) (de Langen, 2008).

This paper, the purpose of which is essentially managerial, focuses on this PPP-based strategic option. A first section presents the research questions dealt with and the data collecting methodology retained, while a second section describes and discusses in a decision support-minded way the findings resulting from data processing.

RESEARCH QUESTIONS AND METHODOLOGY

Research questions
French ports share a common trait: their lack of competitiveness compared to their European North Sea and Mediterranean contenders. This lack of competitiveness has led to a reduction of their respective market shares, more specifically in the trade of containerized goods: between 1989 and 2006, total volume of French ports has increased by 24%, against an average of 60% for other European ports, and the market share of French ports has gone down from 18% to 14%. During this same period, container traffic has doubled in France, but the market share of French ports has been divided by 2, down to 6% (Bolliet, Gressier, Laffitte, & Genevois, 2007).

Among the acknowledged factors of such a situation stands out the insufficient integration of French ports in the European freight transportation networks, depriving them from cost-effective, long-distance "door-to-door" access to EU markets: for the most part, their hinterlands do not extend beyond the national territory, due the low density, and therefore reduced connection opportunities, of French rail and inland waterways infrastructures (Table 1).

<table>
<thead>
<tr>
<th></th>
<th>Hamburg</th>
<th>Rotterdam</th>
<th>Antwerp</th>
<th>Le Havre</th>
<th>Marseilles</th>
<th>Dunkirk</th>
</tr>
</thead>
<tbody>
<tr>
<td>river</td>
<td>2%</td>
<td>30%</td>
<td>32%</td>
<td>9%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>rail</td>
<td>34%</td>
<td>11%</td>
<td>8%</td>
<td>5%</td>
<td>14%</td>
<td>4,5%</td>
</tr>
<tr>
<td>road</td>
<td>64%</td>
<td>59%</td>
<td>60%</td>
<td>86%</td>
<td>82%</td>
<td>91%</td>
</tr>
</tbody>
</table>

Table 1 - Container transportation modal split of leading European ports (Blum, 2010)

Consequently, although France features large ports which could be valuable gateways to European markets, even the specific international trade to and from France is flowing through foreign ports: e.g.: 40% of the hi-tech consumer goods bound for France are imported using Le Havre's North Europe competitors (Revet, 2011).

Another explanation can be found in the productivity of their terminals, which is lower than that of their direct competitors (Table 2).

<table>
<thead>
<tr>
<th>port</th>
<th>movements / hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southampton</td>
<td>71</td>
</tr>
<tr>
<td>Zeebrugge</td>
<td>65</td>
</tr>
<tr>
<td>Bremerhaven</td>
<td>62</td>
</tr>
<tr>
<td>Hamburg</td>
<td>62</td>
</tr>
<tr>
<td>Bremerhaven</td>
<td>62</td>
</tr>
<tr>
<td>Antwerp</td>
<td>50</td>
</tr>
<tr>
<td>Le Havre</td>
<td>41</td>
</tr>
</tbody>
</table>

Table 2 - hourly productivity of container terminals (Mongelluzzo & Tirschwell, 2013)
In such a context, also featuring rapid changes in information processing technologies and freight transportation means, the enhancement of large French ports competitiveness can only come out of better choices regarding resource allocation and investment financing.

As far as port operations are concerned, industrial and commercial activities should be conducted by private companies, the PA dealing with vessel traffic management as a public service for the international trade (Peters, 2001).

Regarding the financing of the relevant resources, and accounting for the reduction of government support, the PA must be able to call upon private investors to fund costly handling equipment, its own financial means being rather allocated to the funding of collective infrastructures (Juhel, 1999).

PPPs are then often the only frame within which private companies and PAs can fruitfully cooperate in the launching of equipment building and operating projects (Olivier, 2005): these projects generate huge investment costs, and their success is tightly depending upon the quality of the resource combination which is implemented.

PPP-related issues have been addressed by numerous authors, from various fields of academic research, with a specific interest found for this topic in the maritime / transportation-centric economic and geographical literature.

As to the investment-sharing motivation for PPPs, Wiegmans, Ubbels, Rietveld, & Nijkamp (2002) investigate the types of assets involved and the respective contributions of public and private partners, concluding that the financing of infrastructure is ultimately made by the public sector, under the assumption that it is not possible to make a commercial profit from infrastructure activities. In this same respect, Juan, Olmos, & Ashkeboussi (2008) rather focus on the contract-framed revenue split between PPP partners, through the provision of a revenue-sharing model dependent on the investment interest of, and risk undertaken by, each partner.

From an operational / managerial improvement standpoint, De Langen, Van der Horst, & Konings (2006), and Haralambides & Gujar (2011), specifically value PPPs as a way to enhance respectively the inland waterways' operational performance (showing the relevance of PPPs as an arrangement to enhance cooperation in container barge transportation) and dry ports competitiveness (supporting a greater devolution of investment to private sector to rationalize dry ports capacity and prices). Under a more global approach, Farlam (2005) and Pagdadis et al. (2008) feed back on key success factors for PPPs (e.g.: affordability and cost effectiveness, while not under-estimating the need for a strong political commitment from public authorities involved in the project, as well as for a contract-based equitable risk allocation between PPP partners).

Conversely, PPPs have not drawn much attention from the management / business administration community. Contributions arise mostly from the accounting and the public management literature, and address predominantly the risk management and the governance dimensions of PPPs: e.g.: Regan, Smith, & Love (2009) suggest that PPPs require a more scientifically costed approach to risk allocation, and a rethinking of patronage risk; Singh & Prakash (2010) argue that for effective partnership
governance, it is imperative to reduce the power asymmetry, develop horizontal co-
ordination, and enhance public managers' capacity for effectively handling interorganizational relationships.

Besides, the economics / geography academic fields provide a rather large sample of papers dedicated to PPPs in a seaport context. Contributions range from the operational level of PPP contract design (e.g.: Theys & Notteboom (2010) provide a classification scheme for the exogenous determination of concession duration) to the strategic level of PPP's impact on port governance (e.g.: Pallis & Syriopoulos (2007) describe the major port development model as a complex mix of public–private arrangements, with even the UK ports applying an extensive “mixed” governance model of port activities), through the intermediate level of PPP-framed port IT development (e.g.: Bagchi & Paik (2001) insist on the positive contribution of PPPs to the feasibility and performance of cargo community systems) or hinterland access (e.g.: De Langen & Chouly (2004) show that hinterland access is a collective action problem the solution of which definitely requires some sort of formal public-private coalition).

However, most of the literature considers the PPP motivation / implementation / evaluation steps from a more generic public-private partnering viewpoint: e.g.: Engel, Fischer, & Galetovic (2010) investigate the role of PPPs in the optimization of the infrastructure financing process, reminding that, provided the PPP contract is correctly designed, the higher cost of this solution may well be the price to pay for the associated efficiency advantages as compared with exclusive public provision. Equally, a vast body of literature is focusing on either of the risk sharing (e.g.: Ke, Wang, Chan, & Lam (2010) suggest that no risk in a PPP should be allocated only to the private partner) and risk management (e.g.: Quiggin (2006) assesses the risk management properties of PPPs and concludes that they should be improved, partly through the provision of new termination options) issues linked to PPPs.

Most notably, from one article to another, the topic dealt with is very specific. It relates either

- to the motivations for PPPs: e.g.: Hammami, Ruhashyankiko, & Yehoue (2006) found that PPP determinants vary across industries depending on the nature of public infrastructure, capital intensity, and technology required, and more specifically that private participation in PPP projects depends on the expected marketability, the technology required, and the degree of “impurity” of the goods or services, or

- to the characteristics of PPP implementation: e.g.: Theys, Notteboom, Pallis, & De Langen (2010) provide a detailed overview of the different phases of the terminal awarding process, including a classification scheme for awarding procedures, or

- to the evaluation of PPPs' outcomes: e.g.: Levinson, Garcia, & Carlson (2006) have built a success-measurement model based on budget compliance, on-time completion, government approval and social acceptability.

Therefore, no global approach of PPPs, encompassing the three steps at a time, is provided by the available literature.
Here, this management oriented, port-focused paper aims at contributing to answer each of the three following questions, as seen from the public side of PAs:

- What are the actual motivations of PAs for PPPs?
- What are the characteristics of PPPs’ implementation by PAs and their partners?
- What evaluation of PPPs is made by PAs?

**Methodology**

The methodology used to help answer these questions is purely qualitative, for both data collection and data processing. This kind of approach supports the close observation of a given situation, taken in its specific context, thus enabling the researcher to have a precise and reliable view of the behaviors of the actors involved in this situation (Patton, 2001). Therefore, it fits well with the purpose of the present research work.

A case-based study has been retained, as it is deemed appropriate for the description and understanding of organizational processes (Eisenhardt, 1989). Furthermore, it complied here with Yin’s (2003) requirements for that matter: “how” and “why” questions were asked, contemporary events were investigated with no control over these events and involved actors, and a global approach was needed as not all of the potentially important variables were known in advance.

More precisely, because there is some knowledge about the addressed issue but much is still unknown, a multiple case study could be considered as suitable, with the number of case studies ranging from two to eight (Meredith, 1998).

In such a multiple case study context, the selection of cases needs to be driven by the two issues of appropriateness and adequacy (Kuzel, 1999), with the latter being concerned with the number of cases for optimizing information richness. Therefore, the case studies should be chosen according to three criteria:

- representativeness: each of the case studies included in the sample must be relevant with respect to both the purpose of research and the phenomenon of inquiry.
- variety: the sample must be made of sufficiently diversified case studies.
- data supply: quantity and quality of data collected from the case studies must be significant in terms of information / knowledge building.

Here, data has been collected from four (Marseilles, Le Havre, Rouen, Dunkirk) out of the seven main French ports. All selected ports

- feature PPPs between their respective PA and private companies, mostly dedicated to the financing and operation of bulk and/or container terminals.
- are situated in very different geographical environments and host all main types of traffic but in quite various proportions of their total activity.
- could bring a wealth of valuable data, as they rank respectively #1 (Marseilles), #2 (Le Havre) and #3 (Dunkirk) nationally; the fourth one (Rouen) ranks only #5 but is Europe’s #1 for cereals trade.

So proper size, as well as appropriateness, are respectively ensured.

To feed useful information from this four-port sample into the research process, the method follows two consecutive phases: first, information collection, then information processing.

Information collection

It is based on semi-directive interviews, identified as a good way for the researcher to collect the representations and interpretations of a given situation built by the actors involved (Brenner, Brown, & Canter, 1985).

More specifically, semi-directive interviews, although structured through a guide to ensure the conversation stays focused on the research topic, are relying mostly on open questions, therefore feeding back potentially rich information on the issues to be addressed.

In the present case, the interview's guide features three parts: one on the motivations for PPPs, one on the implementation of PPPs, and one on the evaluation of PPPs.

The average duration of an interview has been of 3 hours, conducted each time with an interviewee officially designated by the local PA’s CEO.

All conversations have been fully transcribed from the live recordings of interviews. This transcription has been done "word for word" (verbatim) to feed back exactly on what the interviewees had said. The reliability of the transcripts, and the completeness of the information collected, have been ensured by sending these transcripts to the interviewees so that they validate them; some extra content has been supplied by the interviewees through later phone calls. Samples of such transcripts are given hereunder:

"Behind the PPP, there's a drive for competitiveness; Port of Rouen reorganizes itself to enhance its competitiveness."

"Port of Dunkirk was losing money, there was no global unity of command, and port customers were unsatisfied."

"In fact, Le Havre PA leaves this activity to someone else because it doesn't have sufficient financial resources to start something, and also not really the possibility to follow-up in terms of organization."

"It has nothing to do with Port of Marseilles' partnering with private companies. My financial strategy is that I go directly to the financial markets, to bank loans, to public funding. That is my financial strategy".
Once collected and transcribed, the contents of the interviews have been structured through coding and categorization.

Information processing

The data-coding step consists in "selecting, simplifying, abstracting, transforming data to help the researcher find relevant information" (Miles & Huberman, 1994). Here, each element, which seemed of concern for the interviewees regarding such or such aspect of PPPs, has been formalized in a specific word or sentence, in association with a specific code. Hereafter are two instances of this manually performed coding process:

- one interview mentions "working with private companies brings in more reactive management ways"; another one indicates "partnerships lead to a new managerial dynamics, brought by private companies". Both these sentences are labeled as referring to "new private management methods", and coded "new priv meth";

- an interviewee says "As to the container terminal, the PA was losing money and had no development capacity"; another interviewee reports "The PA wants to keep for itself a level of financial resources sufficiently high to be able to sustain its terminal infrastructure maintenance capacity". These two assertions are each summed up as "PA cannot finance solely terminals", and associated with a "PA can't fin term" code.

At the end of this data-coding step, a list of the interviewees' basic concerns regarding the PPPs can be established.

The second step consists in grouping these basic concerns into categories, which should be defined in such a way that they are internally as homogeneous as possible and externally as heterogeneous as possible (Lincoln & Guba, 1985), and must be retained inasmuch as they help satisfy the research objectives (Yin, 2003).

Here, the formal words / sentences and their accompanying codes have been manually dispatched in either of the three topics which are dealt with by the research work, and are used to structure the interview's guide: motivations for PPPs, implementation of PPPs and evaluation of PPPs; to follow-up on the two instances above-mentioned, both "new private management methods" and "PA cannot finance solely terminals" have been assigned to the "motivations for PPPs" category (Table 3).

<table>
<thead>
<tr>
<th>Categories</th>
<th>Words/sentences</th>
<th>Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivations for PPPs</td>
<td>PPP is a financial option</td>
<td>ppp fin opt</td>
</tr>
<tr>
<td></td>
<td>Unity of command</td>
<td>uni comm</td>
</tr>
<tr>
<td></td>
<td>Need for mutual support and risk -sharing</td>
<td>mut supp risk shar</td>
</tr>
<tr>
<td></td>
<td>Productivity</td>
<td>prod</td>
</tr>
<tr>
<td></td>
<td>New private management methods</td>
<td>new priv meth</td>
</tr>
<tr>
<td></td>
<td>PA cannot finance solely terminals</td>
<td>pa cant fin term</td>
</tr>
</tbody>
</table>
### Implementation of PPPs

<table>
<thead>
<tr>
<th>Category</th>
<th>Sub-category</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA is back on its core business</td>
<td></td>
</tr>
<tr>
<td>PA negotiates with traffic-generating operators</td>
<td></td>
</tr>
<tr>
<td>International call for offers</td>
<td></td>
</tr>
<tr>
<td>Preference for present operators</td>
<td></td>
</tr>
<tr>
<td>More and more private superstructures</td>
<td></td>
</tr>
<tr>
<td>PA talks with partners to define who cares for what</td>
<td></td>
</tr>
</tbody>
</table>

### Evaluation of PPPs

<table>
<thead>
<tr>
<th>Category</th>
<th>Sub-category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social reliability</td>
<td></td>
</tr>
<tr>
<td>Strong willingness for port development</td>
<td></td>
</tr>
<tr>
<td>Financial capacity of private operators</td>
<td></td>
</tr>
<tr>
<td>Trust between partners</td>
<td></td>
</tr>
<tr>
<td>Competencies of private operators</td>
<td></td>
</tr>
<tr>
<td>Actual increase in productivity</td>
<td></td>
</tr>
</tbody>
</table>

**Table 3 - excerpt of the output of the categorization step**

This rough pre-analysis of the interviews' content needs to be refined, to supply results likely to be of managerial relevance for PAs and their private partners.

Therefore, the content of the three sets of words / sentences and codes drawn from the categorization step has been further analyzed, in order to identify sub-categories (Table 4) leading to a better understanding of the motivations ports have to use PPPs, of the ways they implement them, and of their evaluation of these PPPs.

Groups of semantically close words / sentences have been manually formed within each of the three categories, each group illustrating one motivation sub-category (e.g.: "unity of command" and "productivity" illustrate "enhancing port competitiveness"), one implementation sub-category (e.g.: "PA is back on its core business" and "no shared projects" illustrate "PPPs support collaboration but no common projects between partners") or one evaluation subcategory (e.g.: "competencies of private operators" and "financial capacity of private operators" illustrate "good quality of partners' competencies").

<table>
<thead>
<tr>
<th>Categories</th>
<th>Sub-categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivations for PPPs</td>
<td>enhancing port competitiveness</td>
</tr>
<tr>
<td></td>
<td>searching for better competencies</td>
</tr>
<tr>
<td></td>
<td>reinforcing financial</td>
</tr>
</tbody>
</table>
Table 4 - sub-categories' contents

As the representatives from the four ports studied do not have exactly the same incitement to, the same experience of, and the same feeling towards, PPPs, some of the relevant sub-categories are shared by two or more of the interviewees, but others are specific to such or such port.

RESEARCH FINDINGS AND DISCUSSION

Definitely brewed from a decision-support perspective, but differing this way from other prescriptive academic contributions (e.g.: Engel, Fischer & Galetovic, 2013; Grimsey & Lewis, 2005; Theys et al., 2010; Vining & Boardman, 2008; Zitron, 2006), this paper feeds back on the research findings through a systematic reference to the actual content of the interviewees' discourses.

Based on the results of the data coding and refined categorization process, the first stage of the research work has consisted in the study of the motivations having led the selected ports to the design and implementation of PPPs.

Motivations for PPPs

The identified motivations are the enhancement of port competitiveness, the search for better competencies, and the reinforcement of financial capacities.

Enhancing port competitiveness

Large French ports are facing a fierce competition from their neighboring contenders to be selected as links of global supply chains.

To fight such a competition, French ports must improve their competitiveness, through better reliability, lower costs, and a wider range of logistics services.
- Better reliability

For a port, poor reliability is all the more harmful for its reputation as disruptions are more frequent, and it may take months, or even years, to earn back the trust of lost customers.

One of the situations identified as actual sources of poor reliability is the lack of unity of command for terminal operations.

Implementing unity of command through PPPs is therefore a way to improve reliability, incidentally thus adjusting to the operating mode of competing ports best known for their high level of performance in this domain: "PPP is a strategic choice against ports such as Zeebrugge, Antwerp, Rotterdam and Amsterdam, which have more competitive personnel management systems" (Dunkirk).

- Lower costs

French ports are bearing higher costs than their direct competitors are, which prevents them from entering markets where they could profit by such valuable competitive advantages as their geographical position and nautical access.

One way for French ports to become more competitive through cost reduction lies in the development of inland mass transportation for inbound and outbound flows.

This means that ports need to invest in the infrastructure, and take part in the operation, of rail and/or waterways transportation networks.

PPPs stand out then as a well-suited frame within which PAs, land/sea-carriers and stevedoring companies can specify how they agree to share the relevant financing and operational activities: "We are working with the container terminal operator to identify mass transportation solutions, either by barge or by rail, for a global and more cost-effective land transportation service" (Rouen).

- Wider range of logistics services

While land is leased by PAs, the building and operation of logistics facilities are trusted to private companies. Part of these superstructures consist in distribution centers which host a number of logistics services the variety of which directly impacts the choice of a port of call by international trade operators: "The contribution of private companies to superstructure development is of strategic importance for the port, considering the unsatisfied and new needs for services expressed by the customers" (Marseilles).

The trusting of superstructure development to private operators is linked to the fact that these companies dominate the freight transportation and handling market: "We associate private companies to the operation of port activities because they have the market and therefore can bring in extended / new traffics" (Marseilles).

Searching for better competencies
In the specific case of port development, the objective is to offer the best cost-effective / quality-efficient service to customers who give no care as to whether this service is provided by public organizations or private operators.

Then, as PAs cannot by their only selves lead all the activities pertaining to ship and freight handling, PPPs stand out for them as a relevant way to attract and get to work together companies supplying the necessary resources: "Port activities involve ship arrivals and departures, freight loading, unloading and handling, and inbound / outbound transportation; we deal with these various steps, but not alone, because we do not have all the necessary competencies for performing these tasks; this is why we have to call on other operators to work with us" (Marseilles).

Reinforcing financial capacities

Hosting ever-larger ships, developing multimodal transportation, increasing freight handling capacity and providing a wider range of logistics services are activities which, taken altogether, require huge amounts of necessarily shared investment.

Three of the four ports retained in the sample have acknowledged the importance of the financial dimension in their respective decisions to implement PPPs.

"Our partnership with the private bulk terminal operator is a financial choice; the PPP is linked to a joint project dedicated to the reinforcement of the port's financial capacity" (Dunkirk).

"When one looks at the public funding of ports, one sees there is a problem: resources are not sufficient and not available in due time; so finally I think that we are using PPPs as a way to compensate for the lack of satisfactory public funding". (Rouen).

"Through this PPP, we trust an activity to someone else because we do not have the financial assets to lead it ourselves." (Le Havre).

With respect to the financial motivation towards PPP implementation, Port of Marseilles has a quite different evaluation: "No, I do not call upon private companies in search of financial resources. Nothing says that we are not able to finance these investments by our only selves. My financial strategy is to call upon the bank loans, the financial market, the EU subventions, this, is my financial strategy." (Marseilles).

However, even if private partners' contribution is not considered as a primary source for investment financing, it still bears at least one advantage over public sources: if there is a need for an investment to be made within a short time deadline, e.g. new container cranes for a terminal, private companies may answer this need (far) more rapidly than the PA. This institution has to comply with public expenditure legislation leading to (often) excessively long lead-times before the investment can actually be made. Through the use of PPPs, some financial flexibility may therefore be achieved, which is acknowledged by Marseilles PA: "Surely, because of public spending procedures, it takes a longer [than using PPPs] time to make a number of investments; so, yes, in terms of financial flexibility, PPPs may be ok" (Marseilles).
The content analysis has shown that motivations for PPP implementation came from the need to increase the competitiveness, the level of competencies and the financial capacity of these ports. Table 5 describes how each port stands regarding these motivations.

<table>
<thead>
<tr>
<th></th>
<th>Competitiveness</th>
<th>Competencies</th>
<th>Financial capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dunkirk</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Rouen</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Le Havre</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Marseilles</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

Table 5 - ports’ respective motivations for PPP implementation

The second stage of the research work has been dealing with the various ways in which PPPs were implemented by these ports.

**Implementation of PPPs**

In all four cases, activities framed by the partnerships have been split in the same typical way: the PA invests in (mostly infrastructure) resources, which it makes then available to the terminal operators; private partners invest in complementary (mostly superstructure) resources and operate the terminal(s). However, on some other aspects, implementation has proved to be rather context-specific, leading to a port-by-port feedback on the results brought by the interviews' content analysis on this topic.

**Port of Dunkirk**

In France, Port of Dunkirk has been a pioneer in the use of PPPs for terminal investment and operation. Starting with the setting up of a partnership for the dry bulk terminal, the PA re-enacted later the same project by signing another PPP, this time dedicated to the container terminal.

The two partnerships have been built in fairly different ways and have lived different lives.

**In the case of the bulk terminal, "the PA has not made a call for bids; it has negotiated with the one which controlled the traffic (Sea-Invest) ".**

**The composition of the partnership for the operation and development of this bulk terminal has not changed since its inception in 2000.**

In the case of the container terminal, partner selection has followed the regular call for bids procedure, leading to the selection as a partner of a European national railroad company (*SNCB, Société Nationale des Chemins de fer Belges, through its subsidiary Inter ferry Boats – France*).

**Differing from the bulk terminal PPP, the composition of the partnership has evolved twice since its beginning.**
Although the SNCB had shown good will and rapidly made costly investments in new container cranes, it decided to move out of the PPP saying that port operation was not its main business.

A new international call for tenders was then made, leading to the selection of two stevedoring companies, each one being a subsidiary of container sea-carrying world leaders: APM Terminals from Maersk, and Translink from CMA-CGM.

Four years later, APM Terminals decided to leave the PPP, selling its share to CMA-CGM.

Port of Marseilles

Selection of the partners has followed the normal international call for bids procedure.

As to the activity split, "The PA has built the infrastructures, and the private operators (MSC and Ports synergy, a subsidiary of CMA-CGM and DP World) have brought [all] the equipment", which fits the usual trend in PPP activity sharing.

However, the implementation process conducted by the local PA displays some typical features:

Because the local PA does not "call upon private companies in search of financial resources", and while acknowledging that it does not "have all the necessary competencies for performing [all port activities] ", this full ownership of the equipment has been only progressively left to the private operators by the PA.

In this respect, the case of Marseilles probably stands as an instance of an issue which future PPP partners need to be aware of: a given potential PPP member will be all the more reluctant to let another member conduct an activity it was itself (partly) leading, as this may lessen its share of the benefits brought by this activity.

Port of Rouen

Acting like the three other ports of the sample, the local PA has taken charge of the port facilities' development and maintenance operations, whereas the private operators provide the port services to the customers.

However, the implementation of PPPs by the Rouen PA features some specificities, in terms of partner selection, of activity split between partners, and of range of activities likely to be supported by a PPP.

As far as selecting the partner(s) is concerned, the process enacted is two-step:

- "During 3 months, there is a preference given to the local actors (e.g.: SOMAP for the operation of the container terminal)".
"If no deal can be struck with the local actors, an international call for bids is launched specifying that, to be selected, a candidate must show out its capacity to increase not only the sea-borne traffic, but also the share of environmental-friendly rail and barge transportation".

The definition of who will do what in the joint investment and operation process is another important part of the PPP's implementation: in Port of Rouen, "The PA is ready to invest in whatever may facilitate the port activities, so we discuss with the private investors, we look at who may take what, think of how it would work out".

Thus, "On the container terminal, everything which is infrastructure, it is the PA; for the superstructures, the private investors take care of that. On the bulk terminals, investment is shared between PA and private companies both for the infrastructures and the superstructures (e.g.: Westerlund for the equipment and operation of the forest terminal)".

Beside maritime terminal development and operation, PPPs have been used to support other types of projects: e.g.: operation of the inner rail network owned by the PA; operation of logistics parks in which the PA has invested in order to enlarge its hinterland.

Port of Le Havre

Although also linked with its strategy of increasing the share of its resources dedicated to its core business and finding the best possible operators for the other activities, Le Havre PA's extending call upon private companies within PPPs has been predominantly financially motivated.

Therefore, the implementation of partnerships has been characterized by a strong focus on who pays for what: "We share the investment cake by saying: we stop there, and the stevedores, the operators, the private side, they begin there and finance the rest".

The Port 2000 container terminal project is typical of such a focus (its PPP model has been extended to all the other port's terminals).

The PA has financed the nautical accesses, the berthing wharves and adjacent land fillings supporting the container handling / storage areas, plus the road and rail inner transportation network, as well as the environmentally linked investments. The private partners (CMA-CGM / Generale de Manutention Portuaire, Maersk / Terminaux de Normandie, MSC / Terminaux de Normandie), which have been selected using the regular international call for bids (only one partner per each of the three terminals), have financed the completion of the handling / storage areas, all the fixed and mobile handling equipment, and the all the storage buildings.

As rarity is probably what best characterizes the port-dedicated financial resources provided by the federal government, the focus by the local PA on the financial dimension of PPPs is easily understandable, and not that all uncommon. However, it has a specific impact on the way the partnerships are implemented in Le Havre: once
they have collectively addressed the primarily important investment-sharing issue, the partnering organizations lead their activities each for its own part and within the boundaries defined by the PPP contract: "We do not make projects together, we do not have joint work in progress".

The third and last stage of the research work feeds back on the evaluation the selected ports make of the PPP as a contractual frame for the development and operation of their activities.

**Evaluation of PPPs**

The evaluation ranges from the good quality of partners' competencies to the actors' willingness to collaborate towards the improvement of the port's competitiveness, through actual gains made on partners' performance criteria.

**Good quality of partners’ competencies**

All four ports of the sample acknowledge the contribution of the relevant competencies brought by the public and private partners involved in the PPP, to the enhancement of their respective competitiveness.

First, "The success of the partnership comes from the building of a PPP based on the combination of core businesses" (Le Havre).

In this respect, the case of Dunkirk is doubly informative:

- the failure, in its first version, of the PPP set up for the container terminal has obviously been due to the lack of competencies of the partner initially retained, the core business of which was intermodal / rail transportation and not maritime terminal handling;

- conversely, the PPP built for the bulk terminal has succeeded predominantly thanks to the well-suited competencies of a partner identified as one of the leading operators on the coal-handling market.

Furthermore, "One PPP success factor is the private sector's competency-sharing, because it gives us new management methods" (Rouen).

Finally, "Good financial resources ensure that the private operators will be able to make the investments assigned to them within the PPP contract" (Le Havre).

**Actual gains made on partners' performance criteria**

In the case of the four selected ports, productivity and profitability stand out as the most important performance criteria shared by the PPPs' partners.

Huge investments in physical and software resources, combined with highly skilled personnel, are usually needed by a port to get even with, and a fortiori surpass, its competitors on the performance productivity dimension.
Besides, "private companies manage their equipment and their personnel so as to maximize a return on investment which needs to be higher than the one needed by such an institution as a PA; thus they are constrained into driving high effectiveness from their resource allocation processes" (Marseilles). To optimize its impact on productivity, the resource allocation must come from a single decision-maker, solely responsible for the operation of the considered set of activities: "The key to success is unity of command and unity of decision" (Dunkirk).

Such financial and managerial requirements often lead to PPP-framed joint projects between the relevant actors, and the partnerships will from then on be likely to succeed inasmuch as they actually help increase the terminal / port relative level of productivity: "partnership with private actors is positive in terms of ship servicing capacity, of volume of traffic, of productivity" (Marseilles).

Profitability is the other criterion on which the PPPs are evaluated by the four ports of the sample. Improved profitability may stem up from revenue increase and/or cost reduction, and both are acknowledged by those ports as having profited by the implementation of PPPs, be it for maritime terminal operation or for multimodal transportation.

For Port of Marseilles, the focus is mainly on revenue increase: "The objective of all our projects is traffic volume growth, so the success of a partnership is linked to the potential brought by the private operators to that end".

Ports of Rouen and Le Havre insist on the necessity of including in PPP contracts a minimum volume clause to constrain the private partner into bringing new traffic, therefore extra revenues, to the port: "We have usage agreements with the terminal operators which are based on traffic commitments these operators need to reach" (Le Havre); also: "We impose minimum traffic constraints to all industrial actors settling within the port premises" (Rouen).

While equally sensitive to revenue increase, Port of Dunkirk has also been looking for cost reduction through its PPP-based projects: "Thanks to single-operator terminal management, we have reduced the global handling cost, and we are now able to invoice to the customers the same price as that of our competitors".

Actors’ willingness to collaborate towards the improvement of the port’s competitiveness

For a port, to reach optimal competitiveness requires that its members are capable to take into account the general interests of the community in their strategic decision-making and resulting operational behavior: "This terminal is operated by a company which shows a real eagerness to develop the port's activities. The director has spent a lot of energy trying to bring in new traffics" (Dunkirk).

For instance, in Port of Dunkirk, which of long is fighting fiercely with its close Belgian and Dutch competitors, longshoremen have wisely understood that probably the main success factor in this battle was social reliability: "When a 1992 legislation defined a new status for longshoremen which their national union rejected, they launched their own union" (Dunkirk). The pioneering role Dunkirk played in France in the setting up
of successful PPPs is at least partly due to this collective interest-aware option taken by the local longshoremen community.

Mutual trust is probably one of the factors strongly influencing the port members' willingness to collaborate for the enhancement of their collective competitiveness: "Among the PPPs' success factors, trust is predominant" (Rouen).

CONCLUSION

Through the detailed content analysis of interviews conducted with PA representatives of four of the seven main French ports, this paper contributes to a better understanding of the "whys" and "hows" of PPP implementation.

Beside sharing the financial load of huge albeit necessary investments ("reinforcing financial capacities"), it appears that another important reason for the setting up of PPPs lies in the ports' drive for a competitive advantage-generating ("enhancing port competitiveness") re-allocation of activities between port actors ("searching for better competencies").

As external and internal contexts differ from one port to another, and even if they have been led globally on the same basis (infrastructures dealt with by the public partner, superstructures taken care of by the private partner), implementations of PPPs display a number of local specificities: number of involved partners (Dunkirk), nature (Rouen) and level (Marseilles) of partner involvement, tightness of cooperation between partners (Le Havre).

Nonetheless, in whatever way they have implemented their partnerships with private operators, PAs fairly agree on what are the conditions for a given PPP to be successful: the quality of each partner's contribution, a collective interest-aware behavior of all partners, and actual individual- and port- level benefits from the partnership.

Theoretically, the retained (although multiple) case-based methodology leads to results featuring a limited potential for extensive generalization. However, the respective situations of French ports, be they national, regional or even local, are quite similar in terms of financial needs / means and activity split between actors. Therefore, the present findings should prove helpful to the governing bodies of these ports, for the design and implementation of collaborative financing and development strategies. Table 6 synthesizes the information that should be of concern in these decision processes.

<table>
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<th>Motivations</th>
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<td>Number of partners</td>
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<td>Reach adequate financial capacity</td>
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Table 6 - decision-support information for strategic partnership implementation

Among other options, future research on port-framed PPP implementation should / could be extended in two ways:

- in the present work, only representatives from French public PAs have been interviewed. Feedback from other types of partners and/or from other countries should therefore be sought for, to identify likely variations and/or possible convergences on either of the three (motivations, implementation, evaluation) topics dealt with by this paper.

- the research has been conducted following a qualitative methodology, therefore drawing data from a limited number of sources and producing a specific type of information. In another project addressing the same issues, a multiple-choice questionnaire could be used to collect data from a larger number of ports and individual respondents, and a quantitative data analysis could be performed to produce a different type of information. An extended knowledge of the PPP implementation process would thus be gained from comparing / combining the results supplied by the two projects.

References


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¹ see also: Edwards & Shaoul, 2003.
² see also: Moore & Hartley, 2008
³ See also: Dekker, Verhaeghe, & Pols, 2003; Vining & Boardman, 2008
⁴ See also: De Langen, 2004; Verhoeven, 2010
⁵ Alexandersson & Hulten, 2009; Padova, 2005
⁶ Baker, 2003; Michel-Kerjan, 2003
⁷ see also: Boardman & Vining, 2007; Regan, 2006; Rondinelli, 2003
⁸ see also: Devapriya, 2006; Engel, Fischer, & Galetovic, 2013; Van Garsse, 2008
⁹ see also: Hodge & Greve, 2007; Sadka, 2007; Soomro & Zhang, 2011