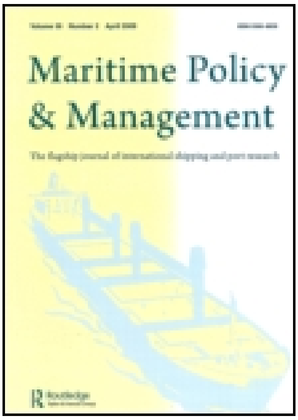

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Concession of the Piraeus container terminal: turbulent times and the quest for competitiveness

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Concession of the Piraeus container terminal: turbulent times and the quest for competitiveness

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This paper examines the recent concession of the Port of Piraeus (OLP) container terminal to Cosco Pacific. Serious discussions on how to transform the terminal to landlord status started in 2004 and, after an aborted tender, a concession award was approved by the Greek parliament in 2009. The contract is now operational after strong opposition by the port unions and a renegotiation phase in 2010. In this turbulent context, the economic implications of the particulars that dominated the negotiations and the provisions that were included in the final concession agreement (i.e. duration, conditions, competition issues, etc.) are worth examination. The analyses of the history, the design of the concession strategy that was endorsed by the relevant policy-makers (i.e. national ministry, port authority, etc.), and the implementation choices made provide an assessment of how the details of the concession might enhance/hamper the conclusion of the concession agreement and affect the organisation and the competitive position of the port.

1. Introduction

This paper examines the concession of the Port of Piraeus (OLP) container terminal (SEMPO in Greek) to Cosco Pacific. Piraeus is the biggest port of the country, one of the two ports of the country classified as of 'international interest' (the other being Thessaloniki), whereas 10 more Greek ports are classified as of 'national interest'. The awarding of the terminal was completed in 2009, following a process that lasted 5 years and was marked by shifting decisions regarding the awarding process and the exact content of the concession. Controversy did not evaporate with the completion of the awarding procedures. Rather, renegotiations started following the arrival of the concessionaire and the election of a new government in 2009, and were completed in spring 2010. Both this turbulent process and the terms of the finally signed agreement make the first port terminal concession in Greece, one of the last European countries to follow this model of terminal operations, an interesting case to study.

Port restructuring in several countries has led to a redistribution of roles between public and private actors. The latter assume responsibility for terminal operators typically *via* concessions. However, in the absence of a typical model, the partnership of public and private actors in seaports is associated with different types of

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procedures [1], and a variety of techniques to design the pre-bidding phase, determine concession duration [2] and structure fees [3]. Clauses included in recent terminal awarding procedures are also linked with limitations to further entry by novo firms [4]. This has generated the attention of policy-makers [5] developing policy guidelines, port authorities searching for the details of applied practices [6]; and scholars, leading to calls for research into the particulars of concessions [7, 8].

Contributing to this debate this paper examines:

- the pre-bidding process, including a discussion of the reasons behind the first unsuccessful attempt;
- the details of the call for tenders and its implications;
- the vital issues that have emerged in the post-bidding phase, as the port moves into the new era.

The paper concludes with the key messages of interest for scholars and practitioners.

The analysis is based on an actor-based approach, specifically the extended 'Ws framework' of Figure 1, where the basic structural elements of any Public Private Partnership (PPP) are presented (based on the Ws framework introduced by Chapman and Ward [9], and applied in ports by Rouboutsos and Pallis [10]). Based on the scope of the concession ('why'), the initiator ('who') structures the 'which-way'. He does so in the light of the (potential) tenders ('whom'). The private sector

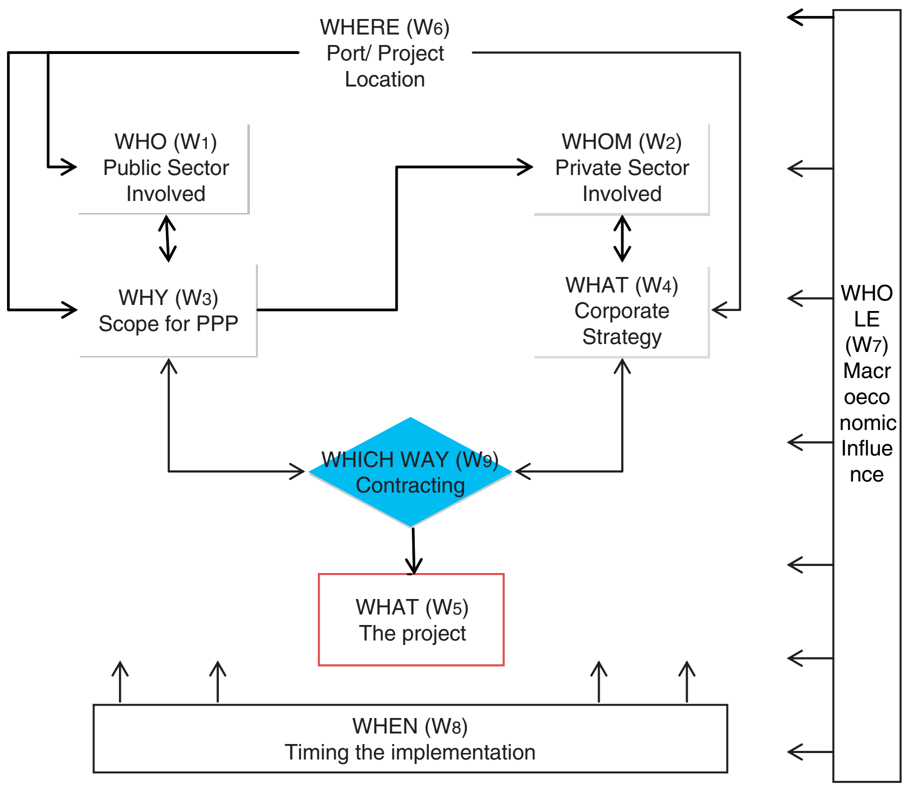

Figure 1. A 'Ws' framework for analysis of a port concession project.

implements its own strategy *vis-à-vis* the project ('What') that is dependent on 'where' the project (*port*; in some cases the *terminal* itself) is located. With demand for port services being a derived demand, the port concession is greatly influenced by the macroeconomic environment, the 'Whole'. Notably, this is a dialectic process with corporate strategies and the 'why' ultimately affected by the 'which-way' as well.

These Ws take on a different emphasis during times in the life cycle of the concession ('When') resulting in a different framework over time. The analysis of the OLP concession in this paper refers to a period that starts with the initiation of the process in 2007 up to the first months after the implementation of the agreement, legally in force since 1 October 2009. Before this, we discuss the background and the first attempts ('false starts') that had taken place in the earlier part of 2000s.

2. The background: reform attempts and false starts

The first initiatives to reform the statutory regime of Greek ports took place in 1999, when Piraeus (OLP), along with the port of Thessaloniki (OLTh), became corporations, at that time wholly owned by the Greek State (Law 2688/1999). Following a later decision, the two ports were listed on the Athens Stock Exchange. Thessaloniki port floated in 2001 and Piraeus port in 2003, with the state retaining approximately 75% of the respective shares and a controlling stake in the management of the port authorities. It is noted that the proceedings of both IPOs (€54.23 million for OLP and €15.22 million for OLTh) were not granted to the ports to finance their own investment plans, but went wholly to the Greek state.

Up to 1999, these ports were organised as state-controlled 'public law undertakings' ruled according to the general regulatory regime of public entities (municipalities, universities, hospitals, etc.) in Greece. In this tradition of port organisation, the state-appointed and controlled public port authority owned and maintained the infrastructure and superstructure, and provided all port services. The responsible ministerial department directly controlled some service provisions (i.e. pilotage). The private sector was involved in port services provision solely in cases when port authorities lacked the capacity or the equipment (i.e. handling cranes, towing). Both ports functioned following the traditional 'public service' port model.

This corporatisation was supposedly initiated for the purpose of devolving the management to local entities, but in fact had nothing to do with relaxing state ownership and/or control, and/or management. The two corporate ports were assigned to be 'whole successors' of their 'public law' versions. Yet, despite some progress to separate the financial transactions of the ports from those the state [11], substance-wise no immediate change in port operations took place. See Psaraftis [12] for more details about cash flows, financing and charging in the Greek port system. Meanwhile, the modernisation of Greek public enterprises became part of a broader agenda, in order to facilitate the country's participation in the Single European Market. Still, there was no immediate change, other than a switch to corporate governance, adoption of business plans [13]. The publication of an EU Green paper on seaports (1997) stating the intention to create a 'level playing field' between and within ports with international traffic throughout Europe contributed to a 'wait and see' policy, as following EU-level decisions minimised the political costs. Nonetheless, the pace towards reforms accelerated as the formation of EU policies proved to be remarkably slow [14] and the dynamics of the economic context continued to pose adjustment pressures.

2.1. *Planting the seeds for future concessions: 2001*

Even though the classic 'service ports' situation did not change with corporatisation, the seeds for future concessions were planted about 2 years later. Indeed, new laws in 2001 stipulated the signature of the so-called 'concession contract' between each of the corporate ports and the Greek state. This contract recognised each port corporation as the exclusive entity that could use and exploit the port's facilities, under prescribed terms and obligations, including the payment of a yearly concession fee. For OLP and OLTh the duration of the contract was set at 40 years, and the fee was set at 1% of the port's adjusted gross turnover (excluding extraordinary income, previous year's income and interest income) for the first 3 years and 2% afterwards. The concession contract for OLP was signed in early 2002 [15], and 40 years was considered a reasonable duration for the contract between the Greek state and OLP. However, that duration was raised to 45 years later on, so as to accommodate the 35-year concession of part of the terminal to Cosco Pacific.

Prior to signing the concession contract between the Greek state and OLP, in the discussion of corporate OLP's Business Plan in 2001, a proposal by the port's unions to explicitly bind the port management to build the future Pier III expansion of the container terminal exclusively with public funds was narrowly defeated within the port's Board of Directors. This, together with the wording of the concession contract a few months later, left the door open for future concessions, even though at the time the explicit mention of such a possibility would have raised a lot of noise from the port's unions. It was felt by port management at the time that since most of the future Pier III throughput would predominantly be transhipment traffic, and hence very volatile, one could not risk building that terminal with the port's own funds. Private funds would have to be sought for such an investment.

2.2. *False starts*

As the series of port reforms in Greece aimed to open the market to new actors, European port policy developments, in particular the 'port services directive' proposal could in principle facilitate such aim. The EU initiative had been under discussion since 2001 [16] and would have opened up access to the provision of port services on the basis of transparency, non-discrimination, and certain principles and obligations. One of the principles was the provision of at least two independent concessionaires if a port exceeded the threshold size of 3 million tonnes or 500.000 passengers per year. However, the proposal proved to be problematic; the European Parliament narrowly rejected it in 2003, and decisively defeated its second version in 2006. That outcome did not facilitate port reform in Greece. Although there was no direct connection, the defeat of the Commission's proposal deprived the Greek government of a serious political argument: that reform had to be done because the EU mandated it. It also gave port unions a political message: if they could win in Europe, they could also win in Greece. And port unions in Piraeus were strongly against a concession of any kind.

In 2004, the incoming conservative Greek government, whose difference from the previous socialist administration as regards the engagement of private enterprises in port operations was, at least on paper, fundamental, decided to move towards a concession of the SEMPO terminals for both OLP and OLTh. The government, as the major shareholder of the port, stated through the Ministry of Merchant Marine, that it was involved in direct talks with several terminal operating companies (Cosco Pacific, HPH, DP World, APM Terminals, Mediterranean Shipping Company (MSC) and ZIM) and governments (China, Korea) that were interested in investing in the ports of Piraeus and Thessaloniki. For Piraeus, the initial thought was to offer Pier I (by far the smaller of OLP's two container piers) for concession. That thought was soon abandoned, as OLP received a €35 million loan from the European Investment Bank to further expand Pier I. Subsequently, the government seemed to favour an intergovernmental agreement with China to transfer the entire container port (i.e. Pier I, Pier II and the future Pier III) to Cosco Pacific.

This was not the first time the Chinese were interested in Piraeus. A few years earlier, China Shipping Container Line, a competitor to Cosco, had a contract with OLP to use Piraeus as a transhipment hub. That contract expired in 2001 and left MSC as the sole container line to use Piraeus as a transhipment hub on a massive scale. MSC's contract started in 1997 (together with Norasia until 1998) and through consecutive renewals had an ultimate expiration date of 2012 and contributed to a significant increase of container traffic through Piraeus [17].

This time, Cosco Pacific openly expressed its intentions to be the likely partner for terminal investments in Greece's two largest container ports (Piraeus and Thessaloniki). In particular, the company expressed an interest to further develop Piraeus as a major transhipment hub in the Mediterranean. The government, through the Ministry of Merchant Marine, talked about traffic on the order of more than 3 million twenty-foot equivalent unit (TEU), significantly higher than the peak of 1.6 million TEU that was reached in 2003.

In spite of these grandiose plans, the tendering process was put on hold in the presence of repeated industrial action by militant port unions. It was not immediately clear if this was the decisive factor. Another reason for this postponement related to the design of the terminal award that the government had endorsed. With the plan being to hand operational rights of the entire container port to one operator, a private monopoly would simply replace a public one. Some expressed the opinion that such preferential treatment would breach EU competition rules. As a result, the national administration decided to abandon that specific process.

3. The concession

The second successful attempt was initiated more than a year later, in January 2007. The reformed intentions of both the relevant ministry and OLP's Board of Directors were for an international tender rather than direct negotiations with any particular candidate. The most significant change *vis-à-vis* the previous attempt was that the concession would not be for the entire SEMPO, but only for Pier II (the largest of the two container piers) and for the future Pier III, whereas OLP would retain operation of Pier I, on which works for expansion had already begun. By contrast, the entire terminal of Thessaloniki (much smaller by comparison) was offered for concession.

Of the two candidates in the tender, Cosco Pacific was the winner as the candidate offering the highest bid. The second candidate was a consortium led by Hutchison Port Holdings, and its subsidiary Hutchison Ports Investments, in partnership (small stake) with a local company Alapis Holding and its subsidiary Lyd SA. It is interesting to note that Hutchison was the winner of the parallel tender in the port of

Thessaloniki, but after some months of negotiations, Hutchison officially stated that the tender was declared void due to the global economic downturn.

3.1. *Where*

Piraeus is the dominant container port in Greece, handling 73.4% of all of the country's 1.86 m TEU container traffic (2007 figures). This included the majority share of the total 1.26 m TEU container traffic destined for the Greek consumer market. In a study conducted for the winner of the concession, Drewry estimated the Piraeus container traffic split in 2007 as 848 694 TEUs (62%) Greek gateway (import–export), 511.391 TEUs (37%) transhipment en route to/from other ports in the region, unrelated to the Greek market, and 8.573 TEUs (1%) transit (to foreign countries by road through Piraeus). Piraeus' transhipment traffic is about 98% of transhipment containers handled through Greek ports. Transit traffic, mainly for Romania and Hungary, is estimated to account for 1% of Piraeus' total gateway traffic. This represents approximately 10% of the transit traffic handled through Greek ports (Thessaloniki handles the remaining 90%). The container terminal contributes almost 75% of OLP's revenues and 50% of its earnings before taxes, depreciation and amortisation.

In contrast to the lack of serious domestic competition, Piraeus competes with foreign ports, mainly as regards container transhipment. Piraeus' major competitor is Gioia Tauro, and secondary ports such as Malta, Limassol, Damietta and Port Said [12]. Piraeus was established as an East Mediterranean hub port in the late 1990s, with the doubling of its container traffic in just 4 years (1996–2000) and transhipment traffic gaining share over gateway traffic. Thereafter, growth continued but not at the pace observed in the regional traffic. In the recent years, this trend has not been sustained—the epitome being the downturn since 2006 when transhipment volumes significantly fell as MSC diverted a large share of its transhipment traffic to competing transhipment hubs in the East Mediterranean, the main reason being significant malfunctioning of the port due to prolonged industrial action.

Approximately, 90% of the transhipment traffic was controlled by MSC, which has been a key customer of the port. In late 2009, MSC opted out of the contract with OLP using a clause that allowed them to do so in case OLP conceded part of the terminal to a third party [18]. Overall (Figure 2), a handful of shipping lines control 70% of container traffic in Piraeus. Greece is well served by deep-sea and short-sea container services. Intra-Mediterranean and Mediterranean—North Europe services comprise the majority of the deep sea, short sea and feeder operators' services calling at Piraeus. There are also seven direct services linking Greece with Asia, four of which were started in 2007 by Maersk, Cosco Container Lines and Evergreen, MSC, CMA-CGM and CKYH. The year before the credit crunch, the number of direct services in the key growth trade route between Asia and Mediterranean increased from 18 to 28. Ships deployed on the route had become larger by an average of 5.6%, and as a result, the Asia-East Mediterranean trade had seen a 50% capacity increase. The inconsistent 2008 data affected by the severe implications of the economics crisis on seaports; thus, they do not allow for conclusive remarks.

3.2. *Who*

Legally speaking, the initiator of the concession ('Who') is the Piraeus Port Authority (OLP) SA. This is the result of the devolution of responsibilities to an

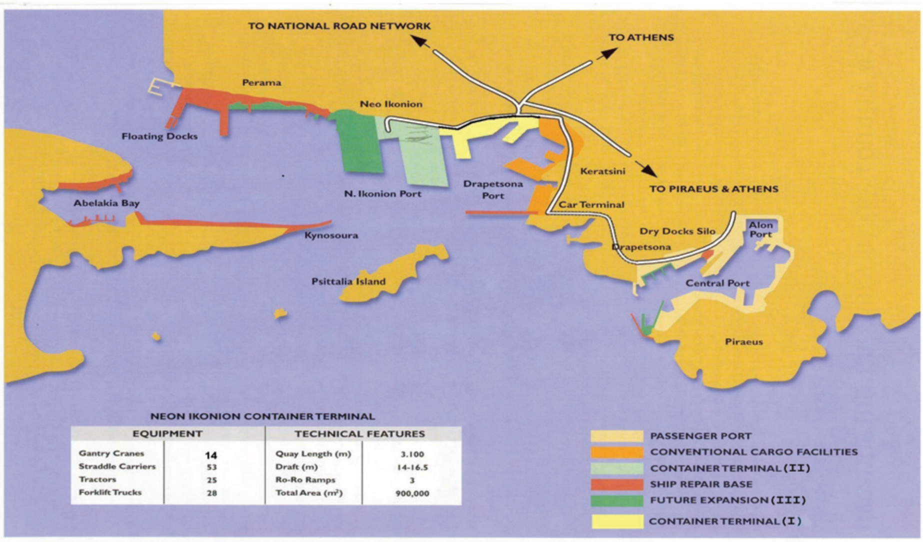

Figure 2. Piraeus port authority SA statistics (1998–2010, TEUs).
Source: Port of Piraeus authority SA, website and annual reports.

autonomous entity, under which OLP acquired the exclusive right to use and commercially exploit the port area with power to undertake all measures required for the development thereof, along with obligations derived from the listing and trading of the company on the Stock Exchange.

Additional players had an important role in this process. Port labour unions were surely among them. All (former and current) civil servant personnel of Greek ports are unionised under the Federation of Permanent Employees of Greek Ports (OMYLE), which, together with the Federation of Cargo Handlers of Greece (OFE) that represents dockers, are the two main port labour unions in Greece. Their main opposition to the concession was based on the initial fear that people would lose their jobs. After the government categorically denied this, it seemed that their opposition was mainly due to the expected loss of income because of the anticipated drastic reduction of overtime pay. In fact, the annual salaries of a few dockers, gantry crane drivers, straddle carrier drivers and selected other personnel working in the container terminal had reached exorbitant levels [19].

3.3. *Why*

For almost two decades, world maritime freight trade boomed. In 2000, container maritime trade exceeded for the first time 200 million lifts. It took 8 years more to reach 500 million lifts, in 2008. Yet, despite the location of Piraeus at the crossroads of three continents, its potential to become one of the most important nodes in the route connecting the Far East with Europe through the Suez Canal, did not turn into reality. This was even though the ocean transport industry was growing at a faster rate than the terminal industry could build facilities.

In this context, the responsible authorities initiated the concession putting forward two main reasons. The first one was the necessity to develop infrastructure *via* investments that would exceed €400 million in order to match the new type of demand (serve larger, specialised containerships, integration of supply chains, etc.) The creation of a hub, or more, in Greece was the central theme of the national port policy, as proved by the quest for locations (i.e. in Crete) that might had the potential to develop to new ports. Low productivity levels, serious infrastructure shortcomings (e.g. transhipment installations) and absence of inland infrastructure (e.g. in-port rail station) undermined competitiveness. Greek public administration deficiencies were the second reason. OLP estimated the operational cost of the inefficiencies as 40% over the standard costs of competitive ports located in East Mediterranean sea. All this happened at a time when public investment had stagnated. Despite EU initiatives to improve (trans)port infrastructure *via* PPP there had been no significant private capital mobilisation and the situation had deteriorated. The country's economic policies to reduce the public deficit further constrained public investments in 'public law undertakings'. The cumulative financial state of OLP, since port devolution had also deteriorated for a financial analysis [20, 21].

Based on these reasons, the Ministry of Merchant Marine stated the need for a concession that would [22]: (1) limit the financial risk; (2) pass the market risk to the terminal operator; (3) shorten the time for completing the investment; (4) lower administrative and operational costs and utilise the total of the production factors through the implementation of modern management practices; (5) provide to OLP a net annual income of at least €60 million; (6) triple the company's capitalisation on the stock market; and (7) benefit employees and the society *via* expansion of the port and related activities. The financial motivation of the project was confirmed by the proposal to sell a further stake of OLP to the general public (*via* an IPO) immediately after the announcement of the winner of the tender.

Neither the initiation of the concession, nor the split of the total terminal capacity between two operators was about intra-port competition [23]. The split was more about finding a way to accommodate the 'public sector presence' than about competition. This is illustrated by the search for cooperation between OLP and Cosco Pacific from day 1 of the concession, with the OLP management officially announcing in December 2009 the negotiation with Cosco Pacific of a subcontracting agreement, as well as the discussion of labour and trade issues arising during the cohabitation period and in the first years afterwards.

3.4. *Which-way*

3.4.1. *Scale and terminals split.* In February 2008, OLP published an open international call for tender for a concession for the development, operation and commercial utilisation of the existing trapeze-shaped Pier II terminal that was already in operation (Figure 3). Pier II has a 16 m maximum depth, a wharf length of 2.011 m, of which 790 m is on the eastern side, 520 m on the southern front and 701 m on the western side, a land surface area of 373.365 m^2, an infrastructure resulting in 626.000 m^2 storage area and a 19.200 m^2 container freight station. It also included the existing superstructure and equipment (14 ship to shore cranes, 1 mobile crane, 64 straddle carries, 22 forklifts, 29 tractors and 39 tractors).

Heading towards the concession, the OLP expressed the view that the total capacity of 1.6–1.8 million TEU pa had the potential to be increased by 1 million TEU pa *via* machinery and equipment upgrades, revamping of the ship to shore cranes, equipment and application of a high-density stacking system. The winner would also be granted space for the construction, operation and commercial

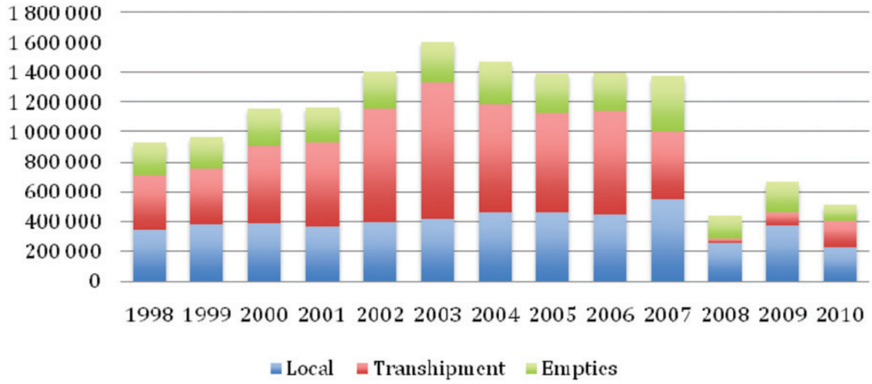

Figure 3. Piraeus container port terminals.

utilisation of the Pier III terminal that would increase capacity by at least another 1–3.7 million TEU pa.

At the same time, it was decided that the concession would go hand-in-hand with the development of the separate Pier I terminal, to be operated solely by OLP. The extension transformed this formerly trapezoid terminal into a triangular terminal having a length of 763 m, a water depth of 18 m (formerly 12 m), and a capacity of 1.1 million TEU pa. Along with the purchase of machinery and equipment, upgrading of the management information system, and the future construction of a port railway station, this enabled OLP to serve post-panamax vessels and compete with Cosco Pacific operating at the next pier. OLP secured about €80 million from EBRD, adding from its own resources and/or equipment leasing agreements to reach a total budget of €160–170 million.

3.4.2. *Duration*. The duration of the concession is for an initial term of 30 years (as lengthy duration had been seen as a plus for securing the interest of terminal operators, thus was among the pre-set conditions of the call for tenders) commencing on the date the winner starts the Pier II operations, with a mandatory extension for a term of 5 years subject to the tenant's fulfilment of its obligations to construct the new Pier III as provided under the concession agreement, or in correspondence of a period of interruption of operation caused by OLP. The initial 'concession agreement' between the Greek state and OLP SA that had been entered into force in 2002 was extended accordingly (i.e. to 45 years) in order to accommodate the duration of the concession contract between OLP and its tenant.

3.4.3. *Criteria used to evaluate competing bids*. Seeking a global player with significant experience in terminal operations (i.e. handling at least 1 million TEUs over the last year before the concession), the Greek government put forward a call for tenders that prioritised the experience of the operator, its financial solvency and minimum throughput guarantees that reached 2 million TEUs pa by the sixth year of the concession, and 3.7 million TEUs by the eighth year and thereafter. There were no other specific requirements, as the dominance of 'financial' rather than structural logic resulted in the loss of some of the parameters applied in other concessions with the aim of securing more than the financial objectives of the concession.

Notably, the concession agreement does not include any renewal clause. Nor is there any reference to what might happen after the end of the concession. Any reference to the phasing of investments over time by the winner is also absent. This agreement framework runs the risk that the concessionaire will typically cease all investments in the last years of the concession and allow the deterioration of the investment in the later stages of the concession.

3.4.4. *Labour issues.* The whole terminal award process contradicted one of the major targets of the concession, i.e. directly challenging the labour regime as an integral part of inefficient public sector traditions. With all of the port personnel actively participating in the unions, the latter have managed to advocate successfully the absence of substantial port labour reforms. In addition, the legal framework does not allow for redundancies in the public sector and ports are overstaffed. According to Psaraftis [24], Piraeus had had a strict employer–personnel relationship with the dockers' workforce and the state had decided to wait for the concessionaire to apply 'market rules' in order to reverse many of the 'stone-age' regulations (organograms demanding nine dock workers per gang, operational practices, dockers' payment schemes).

The whole process had included neither provisions for re-training port workers and for integrating technology usage into their core skills, nor a mechanism for certifying port workers' qualifications. Port reform would mean that the future of the existing unskilled port workers would be in danger, while the port would have to develop schemes for providing appropriately trained personnel. The approach leaves open the potential difficulty of meeting the demand from the terminal operators for skilled labour in order to improve quality and technologically upgrade services that generate value for the users.

Nonetheless, the awarding of the terminal implied the de facto potential of reforming existing practices. The private terminal operator secured the flexibility to implement its own practices, as there was no provision restricting such implementation but the obligation to employ existing personnel for the first 18 months of the concession.

3.5. *Whom and what strategy?*

A number of parties expressed an interest in bidding for the concession. DP World was among the first to drop its bid to concentrate on the parallel, small-scale concession of Thessaloniki. Hutchison (which had already won another concession in the region at Izmir), APM Terminals and the thought most likely to win the concession Cosco Pacific had meetings about an alliance to outbid the competition. PSA and Dragados also sought consortia formation in order to bid and operate the concession. Both the listing of the parties that expressed an interest in bidding, and the activities of these parties, are in line with the view that within the current market structures and macroeconomic environment, the conditions included in contemporary concessions ('where' and 'which-way') favour big players and consortia formation [4]. In practice, these intensive activities led the Greek government to delay the completion of the tender procedure for 2 months at the request of potential bidders.

The winner of the concession was the bidder offering the highest price, subject to acceptance of the pre-set by the state minimum throughput guarantee throughput the life-span of the concession. Cosco Pacific announced that it had offered a price in the region of €500 million, and declared its intention to finance the project for the entire concession period by a combination of shareholders' equity and external financing amounting to €250 million. Cosco formed a wholly owned subsidiary company incorporated in Greece, PCT (Piraeus Container Terminal S.A.) that took up the Concession pursuant to the terms of the concession agreement in October 2009. The first declared objectives were to improve the capacity and electromechanical equipment of Pier II, construct Pier III, and deliver the full mechanical equipment that would guarantee the annual 3.7 million TEUs capacity from year 2015 onwards. The upgrading of Pier II is scheduled to be completed by 2012 and equipment will be installed gradually up to April 2014. Construction of Pier III is scheduled to be completed by October 2015.

3.5.1. *Economic evaluation.* The evaluation of the OLP-Cosco deal from an economic perspective reflects the strategies of both actors partnering in the concession agreement.

The total consideration payable to OLP over the 35-year term of the Concession comprises:

(1) *Initial payment*: an one-off initial payment of €50 million and instalment payments of five equal yearly amounts commencing in 2010.
(2) *Concession return*: a percentage of annual consolidated revenues. This is a variable rate ranging from 21.0% (for the first to eighth years of the concession) to 24.5% (from the ninth year onwards), subject to a guaranteed minimum annual payment to OLP, to be paid on a monthly basis throughout the term of the Concession Agreement—as described in the call for tenders.
(3) *Annual lease fee I*, which is the yearly lease fee relating to the length of the berthing dock; the amount per metre per year is set at €1800.
(4) *Annual lease fee II*, which is the yearly lease relating to the surface area of the quays; the amount per square metre is set to €4.00 per year.
(5) *The annual escalation of lease fees* by 2% on top of the Consumer Price Index (CPI) of Greece (2%+CPI). In the case of a negative CPI, the escalation will be 2%.

Following the naming of Cosco Pacific as the winner of the concession, OLP provided data on the deal, in particular the full rent shown in Table 1. Both the Greek government and OLP publicised these figures, focusing on the €4.3 billion to be received by OLP during the 35-year concession. This comes out at approximately €123 million per year on the average, which is an impressive figure given that OLP's annual turnover was of the order of €171.35 in the year before the credit crunch (2007), and €116.04 million in 2008.

Of course, the effect of different discount rates cannot be seen from these data alone. In fact, soon after the €4.3 billion figure was announced, the Hong Kong Stock Exchange asked Cosco to provide an explanation of the amount of money it would pay. The guaranteed amounts and the Net Present Values (NPVs) shown in Table 1 were also given. All NPVs are computed at a 9% discount rate, set by OLP as the one that would be used in these calculations. Table 2 shows the effect of different discount rates and time durations on the NPVs. The 9% column (which is the actual discount rate) is the most important. This shows that the NPV of €1 million reduces to 42.2% of its value after 10 years, to 17.8% after 20 years and to

Table 1. Full rent *vs* guaranteed rent (000 €).

	Full rent (000 €)		Guaranteed rent (000 €)	
	Current prices	Net present value	Current prices	Net present value
Total concessionaire's income	*15 133 312*			
Down payment	50 000		50 000	50 000
Rent I	417 601		417 601	82 510
Rent II	173 405		173 405	34 224
% of income	24.2%			
Additional amount tendered	3 663 829		2 747 871[a]	498 015
Total**	4 304 835	830 754	3 388 877	664 749

Notes: [a]This is the minimum additional amount tendered.
**The second bidder offered 19% of its income, leading to a full rent of 3 422 440, and a guaranteed rent of 3 036 6988 (both at current prices).
Source: OLP SA, 6 June 2008.

Table 2. NPV of €1 million, as a function of the discount rate and of the time interval before the amount is received.

	0%	5%	9%	15%
0 year	1 000 000	1 000 000	1 000 000	1 000 000
10 years	1 000 000	613 913	422 411	247 185
20 years	1 000 000	376 890	178 431	61 100
35 years	1 000 000	181 290	48 986	7509

only 4.9% after 35 years. This makes the NPV of €4.3 billion over 35 years equal to only €830 million.

Therefore, the announcement that OLP would receive on average €123 million per year for 35 years (and some €4.3 billion in total) is factually correct but quite misleading. Assuming a 9% discount rate, this amount equals €52 million when received in year 10, €22 million when received in year 20, and only €6 million when received in year 35. Looking at it in reverse, even though during the first years of the concession the fees would be a significant percentage of the port's annual turnover, this percentage will steadily decline over the years and towards the end of the concession it will be very low. The €830 million NPV divided by 35 is €23.7 million per year, which is of the order of 14% of OLP's turnover and some 71% of its pre-tax profits in 2007 (€33.45 million). The 2008 profit (€8.91 million) is not considered given the special economic conditions of that year. These percentages certainly do not look as impressive as the much-advertised amount of €4.3 billion.

4. Post-contract considerations and renegotiations

The Greek Parliament ratified the OLP-Cosco Pacific contract in March 2009. Port labour unions and the prefecture of Piraeus, questioned the legality of the entire procedure, from the tender itself to the contract and to its ratification by Parliament. Lawsuits to that effect were filed in several courts, including the Supreme Court.

That the contract became vested in law certainly did not help these lawsuits, although the argument was that the tender itself was illegal under the legal regime at the time it was issued.

The most interesting issue concerns some of the legal provisions of the ratification. These stipulated, among other things, that Cosco Pacific would enjoy various income tax exemptions and that its VAT and depreciation obligations would be more favourable *vis-à-vis* the standard obligations of a Greek corporation, including OLP's. Also, accumulated losses could be offset against the taxable profits of later periods without any time constraint.

Such provisions were not included in the tender or the contract itself, but only in the law that ratified the contract, raised some eyebrows, particularly since OLP itself was not subject to these provisions. One could therefore wonder if competition between the two entities would be fair. These provisions also drew the attention of the European Commission, which asked the Greek government to provide clarifications so as to ascertain whether these provisions were compatible with EU law. At the time of writing, this matter was still open.

With the new socialist government coming to power in October 2009, and at the very date the OLP-Cosco Pacific concession contract was supposed to commence, a series of strikes by the port unions shut down the container terminal for close to 2 months. The fact that the party representing the government was sympathetic to the unions' cause before the election certainly made it more difficult for it to deal with the unions after the election. Finally, the strikes ended with OLP agreeing to reopen the case on two fronts: (a) to renegotiate the OLP-Cosco Pacific contract and (b) to negotiate with the port unions on a series of demands of the latter.

With respect to (a) not much is known, except that Cosco Pacific took over full operation of Pier II in June 2010, at the end of a transition period during which OLP personnel operated the pier on Cosco's behalf (as stipulated in the contract). It is not clear what, if any, provisions in the contract changed. With respect to (b), the unions won a major concession from the port management that newly hired personnel would be offered the same salary and working rules as existing personnel. That concession reversed the decision of the previous port management that OLP could hire new personnel at different pay and under different and more flexible work rules than those applicable to existing personnel. This is certainly a decision that, at first glance, moves in the opposite direction to the work reforms that are necessary for a more efficient operation.

From conversations with Cosco Pacific executives in Piraeus, we understand that the composition of the dockers' gangs for Cosco Pacific at Pier II is 4 people. At the same time, the equivalent OLP dockers' gangs working at Pier I, a short distance away varied from 6 to 9 people. It is unclear whether OLP will proceed to the harmonisation of these docker gangs to bring them in line with those of its competitor operating at the adjacent pier. Without this harmonisation, OLP will be unable to compete on price as its ability to offer competitive tariffs *vis-à-vis* those of Cosco Pacific will be severely restricted if excessive personnel work in the terminal [25, 26]. Thus, far the only competitors of OLP have been other Mediterranean ports handling transhipment traffic. From now on, competition will be right at OLP's doorstep, and will also include local (gateway) traffic.

A transient factor that could weigh in favour of OLP in the medium term is the necessary equipment and other refurbishment work that Cosco Pacific is planning to undertake at Pier II. That will go in phases and will entail consecutively shutting down parts of the terminal until the refurbishment is completed. This will essentially limit the capacity of Pier II to a fraction of its full capacity, while OLP will operate the already upgraded Pier I at its full capacity [27].

A potentially more disruptive scenario concerns the necessary infrastructure changes when the much coveted rail connection comes into the terminal. The rail connection will link SEMPO to a major marshalling yard some 10 km away, and has the potential to expand Piraeus's hinterland to Northern Greece and the Balkan states. This long standing project, managed by the Greek Railway Organisation (OSE), will eventually reach the point when a portion of the terminal will have to be carved out for the rail station (€1.2 million). This will affect Pier II more than Pier I during the construction phase, but the disruption could be more than offset if Cosco Pacific has better access to rail connections than OLP after this study is completed.

The changes that stem from the concession will drastically alter the structure of financial flows to and from OLP. The challenge will be to achieve a scheme so as to stay competitive within the Mediterranean port market, particularly in the container sector. OLP witnessed a severe 'cargo drain' when most of its non-unitised general cargo fled to the nearby port of Elefsina in the late 1980s and early 1990s. The reason for this loss, most of which has been irreversible, was OLP's inability to offer competitive rates, not least because of dockers' intransigence to reform of their work regulations.

Last but not least, and as this paper was being finalised (June 2011), the Greek government, in the context of a new loan package from the EU, the European Central Bank and the International Monetary Fund, announced a sweeping programme of privatisations of corporations in which the Greek state has a stake. The ports of Piraeus and Thessaloniki are among the corporations to be privatised. It is not yet clear what model of privatisation will be followed for the ports, but it was made clear that these privatisations would proceed at a fast pace. The outcome of this process was not known as these lines were being written, but may very well drastically diminish or even completely end OLP's role as terminal operator in Piraeus. In case Pier I is concessioned to another port operator (or even to Cosco Pacific), OLP would be functioning as a pure landlord port in the years ahead, and this may also involve other parts of the port, such as the car terminal, the passenger port and others. However, it is yet not clear if such model would be used, as another possible model might be selling a tranche of shares to interested investors.

5. Conclusions

This study has analysed the process of concessioning Piraeus container terminal, and the key challenges resulting from the specifics of the pre-selection, awarding and post-signing periods of a concession process.

The review of all three stages has demonstrated that this has been a heavily politicised process, with the national government endorsing an interventionist approach, either in terms of scope (Why) or process (Which way) of the award. The managing body of the port enjoyed limited freedom to develop port-level guidelines and a process reflecting the specific peculiarities of the terminal. As a result, fundamental competition issues, including the size of the terminal to be awarded and its implications, or aspects of the modal split, have not been part of the process.

The combination of decisions regarding the lengthy duration of the contract (at the upper limit of the discussions that took place during the 2000s in Europe); the emphasis on pre-selection criteria that could be reached only by well-funded global players or consortia with specific expertise; the chosen scale and sub-division (e.g. association of the awarding of an existing terminal with the right to construct a new one and a scale of operation with maximum 4 million TEUs pa capacity) have limited considerably the pool of potential candidates for entry. This is in line with the argument [4] that despite the initial aims, the concession design, criteria, and terms used in practice (unintentionally or not) discourage newcomers and create barriers to entry, e.g. economic and locational [28]. The details of the Piraeus case suggest that the market consolidation now emerging and the concentration of capacity amongst a few 'global' terminal operators [29, 30] are not just the products of the corporate strategies developed by the latter.

The findings are also in line with changes in other ports, whether these are Singapore [31], Baltimore [32], Los Angeles/Long Beach [33], Dubai [34], Busan and Rotterdam [35] or inland port developments in India [36]. Even though policy-makers seek a generic concession model, i.e. a port services market opened up by concessioning, the decisions were shaped and the outcomes were largely affected by the characteristics of Greek public administration. In other words they were ultimately structured by the norms and traditions of the institutional system within which they took place.

The transformation of OLP (even partially) into a landlord port might provide the opportunity to give a significant push to Piraeus's position within the Mediterranean container sector, particularly if serious investments in infrastructure and superstructure are pursued. But it is not clear how much of this push will be due to the tender, and how much to OLP itself. For OLP as a corporation, the future will be full of challenges, most coming from the fact that it will have to compete with its own concessionaire for container traffic. To be able to do so, it will have to push for reforms that are long overdue.

It may be premature at this time to make a definitive statement on the subject of what lessons can be learned from the analysis of the award process for the concession itself, given that most of the 'operative' part of the concession lies ahead. However, in the authors' opinion, one of the lessons is that if for whatever reason the necessary reforms for a port in the public sector are not forthcoming, sooner or later these reforms will be brought about by the private sector. In Piraeus, continuing intransigence as regards work regulations ultimately played a key role in the decision of the port's principal shareholder (the Greek state) to adopt the landlord model.

Another lesson that can be learned in the case of Piraeus is that the port's corporatisation in 1999 and its subsequent entry into the Athens Stock Exchange in 2003, although important in their own right, had very little to do with the port's competitiveness and ability to evolve as a modern port. These two institutional developments did nothing to force (or even encourage) the port to be more competitive, that is to provide higher quality services at competitive prices [37]. The institutional inertia of decades under the previous regime seemed to be too high for significant reforms to be realised, in spite of positive achievements in terms of infrastructure, superstructure and other developments (for instance, the computerisation of SEMPO in 2001). It remains to be seen if the concession will be the catalyst allowing such inertia to be overcome, so that the port can evolve more aggressively in the future. This is even more so given the recent (June 2011) announcement of further privatisation plans.

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19. Salaries of up to €140 000 a year, with most dockworkers registering for work from 325 to 335 days per year, were confirmed by a judicial inquiry in 2004. These were mainly due

to antiquated work regulations on the composition of docker gangs and other rules, including payment for work in the terminal.

20. Despite a successful beginning with revenue growth from €12 million to €30 million in 2002, in 2005 the revenue was just €17 million, while all the key financial metrics (i.e. equity growth, asset growth, and productivity growth expressed as operating profits/job) had deteriorated.
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