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A Greek prototype of port governance

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ABSTRACT

In the last year of the 20th century, Greece embarked on a major program of port governance reform. While developments were initially limited to devolution of control to corporatised port authorities, the most recent years (2008–2016) have been eventful. The arrival of a global container terminal operator (2008), the selling of the country's major port authority (Piraeus) in 2016, and the setting of national level monitoring institutions reshaped the Greek port system. This study revisits the first wave of reforms and examines the port governance configurations and the reform process as it unfolded over the last decade. This discussion includes an examination of the background conditions (port sector developments, economic and political context,) aiming to understand the foundations of the endorsed decisions and of the apparent delays to progress announced reform programs. The paper also discusses the evolution of the container ports market in Greece, recording the increased market concentration that followed the concession of the Port of Piraeus terminal, as well as the different trends (as regards throughput, investments, and commercial relations) that were observed in the case of the privately operated container port. Compared with the models endorsed in other countries, the analysis demonstrates the presence of a unique—in many respects—Greek prototype. The national level institutional setting, defined as the rules, norms, and economic and social context within which reforms were endorsed, have had a causal effects on the choices made and the structures of port governance endorsed.

1. Introduction

In the last year of the 20th century Greece embarked on a major program of port governance reform. With ports losing users and competitiveness diminished by low productivity levels and infrastructure shortcomings (see: Goulielmos, 1999; Pallis, 2007), the devolution of administration and decisions to port level entities was seen to be the main priority. The first initiatives were the quasi corporatisation of 12 ports of 'national interest' (1999) and the listing of the two major ports of the country, Thessaloniki (in 2001) and Piraeus (in 2003), at the stock exchange.

Almost two decades later this reform program is still 'in progress' and a long-term governance framework is not yet in place. A number of key developments post-1999 further reshaped the governance structures of the Greek port system. The first ever terminal concession (2008) and the arrival of a Chinese state owned company (China COSCO Pacific) in Piraeus initially as a terminal operator (2009) and most recently as a majority port owner (2016) are major changes that continue to generate more than local interest. Further privatisation plans, the way that secondary ports should be administered and the setting of national-level monitoring institutions also form part of the agenda.

Meanwhile, the economic crisis that hit the country in 2010 engaged a troika of international institutions—International Monetary Fund (IMF), European Commission, and European Central Bank—and successive Greek governments of all different political orientations (socialist, conservative, radical left) in discussions about structural economic reforms. Port governance is included in these discussions. Standard solutions already applied internationally (such as the landlord model and its contemporary adjustments) and 'innovative' proposals prioritising the 'selling' of ports in order to ease the debt of the country are under consideration.

This study examines the specifics of port governance structures currently in place and the factors that shaped the related process of change and its outcomes. A timeline is detailed in Table 1.

The paper also discusses the evolution of the container port market in Greece, as this is the market that has been mostly affected by the port governance developments since 2008. True, any conclusions on the relationship of port governance and performance demand both a longer period of governance model implementation and a more exhaustive analysis, for instance the causality of throughput or other trends might not be related (only) to port governance characteristics. Yet, this part of the study allows two most interesting observation. The first one is the increased market concentration that followed the concession of the Port of Piraeus terminal to a third party. The second one

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Table 1
Timeline of Greek port reform.

	Year	Reform
First round	1999	Piraeus Port Authority (PPA) and Thessaloniki Port Authority (ThPA) converted to Sociétés Anonymes (S.A.) (Law 2688/1999)
	2001	10 Port Authorities converted to S.A.s (one share owned by the state) (Law 2932/2001) Establishment of the General Secretariat of Ports and Port Policy (Law 2932/2001) ThPA S.A. listed in Athens Stock Exchange (state retains 74.27%, of shares)
	2003	PPA S.A. listed in Athens Stock Exchange (state retains 74.14% of shares)
Second round	2008	Public tenders for the concession of (i) Thessaloniki Container Terminal; (ii) Piraeus Container Terminal Pier II (operation); & Container Terminal Pier III (greenfield)
	2009	Piraeus Container Terminal (PCT) S.A., a COSCO Pacific subsidiary, commences operations of Pier II
	2010	National economy experiences crisis—intervention of International Monetary Fund (IMF) and European Institutions (European Commission; European Central Bank)
	2011	PPA commences operation of Container Terminal Pier I
	2012	"Friendly agreement" between PPA S.A. and PCT S.A. to revise concession terms
	2013	All shares of Port SAs transferred to Hellenic Republic Asset Development Fund (HRADF) One more port is transformed to S.A. (Evia Port Authority) Non S.A. ports capacity to operate under a Port Authority S.A. form (Law 4150/13)
	2014	Establishment of the Ports Regulatory Authority (controlled by Ministry of Mercantile Marine) Second "Friendly agreement" between PPA S.A. and PCT S.A. to revise concession terms
	2016	China COSCO Shipping Corporation Limited wins a tender call for buying 67% of the shares of the PPA SA. Greek Parliament endorses the decision in July 2016. Conversion of the Ports Regulatory Authority to independent authority Establishment of a Public Port Authority (PPA) having one branch (Piraeus, PPA)

Source: Authors.

are the different trends as regards throughput, investments, and commercial relations, which were observed in the case of the privately operated container port comparing to development in publicly owned and operated container ports.

This is not the first attempt to examine and theorise the shapes of port governance in Greece since the departure from central government control. Pallis and Vaggelas (2005) found that in the early 2000s infant autonomous Greek port entities were expecting the efforts of the European Commission to develop a European Ports Policy to work as an accelerator of changes at national level. Pallis (2006) examined the very first steps of the Greek port reform. Employing the matching framework approach (Baltazar & Brooks, 2001, 2007), he identified the absence of a matching "structure-economic environment-strategy" configuration that undermines port competitiveness. Pallis (2007) discussed the difficulties of detailing a national port strategy and the first unsuccessful efforts for a concession of Piraeus container terminal. Psaraftis and Pallis (2012) demonstrated that the process of awarding the Piraeus container terminal to a third party was a heavily politicised one, and advocated that the terms of the concession created (intentionally or not) economic and locational entry barriers, thereby restricting competition.

The emphasis of this study is on the configurations that unfolded during the lengthy second round of the port reform program. This period commences when an International Terminal Operator (ITO) was awarded the Piraeus container terminal (2008) and begun operations in Greece (2009) and concludes with the completion of the sale of the port of Piraeus to a third party in 2016 along with the creation of two further administrative bodies operating at national level. This distinctive reform period 2007–2016 provides an opportunity to go beyond mere description and theorise whether the endorsed structures correspond to existing widely applied models. It also allows for reconsidering whether, and why, the reform processes produced a framework of structures and strategies matching the demands of the existing economic environment. The analysis begins with a brief reassessment of the first (pre-2008) round of reforms, as the devolution programme set the foundations for the subsequent developments.

The analysis reveals the presence of a unique in many respects prototype of port governance. It also highlights that the national level institutional setting, that is the rules, norms, and economic and social context within which reforms were endorsed, have had a causal effects on the choices made and the structures of port governance endorsed.

2. Devolution revisited

A latecomer in port governance reforms, Greece decided to follow the corporatisation path (World Bank, 2000) of 'port devolution' model already adopted by several countries (see: Brooks & Cullinane, 2007). In 1999, the authorities of the two major ports—Piraeus (PPA) and Thessaloniki (ThPA)—were converted to government-owned port corporations. In a move to limit the fiscal burdens of modernisation, within the next four years these entities were listed on the Athens Stock Exchange. The State retained 75% of the shares. Meanwhile, in 2001, the responsibility for 10 other ports (Alexandroupolis, Elefsina, Corfu, Herakleion, Igoumenitsa, Kavala, Lavrion, Patras, Rafina, Volos) of national interest was devolved to 10 autonomous port authorities with the sole share of each entity owned by the State. These ports were supposed to operate as 'private-sector' businesses with the objective of developing infrastructure and offering quality and competitive services. The designated list of ports of national interest was based on geographical criteria. Rather than including the major ports of the country, the list included the major port of each of the regions of the country, plus a couple of additions in the case of the broader region of Athens/Piraeus.

The institutional setting resulted in a slow reorganisation pace and limited the likelihood of fulfilling the targets set. Despite global maritime trade booming, public investments stagnated. Serious shortcomings of port (e.g. transhipment installations) and inland (e.g. in-port rail station, connection to the rail network) infrastructures continued to limit the competitiveness of Greek ports. Public administration deficiencies added to operational costs. Institutional inertia for decades limited the potential of significant reforms. As the examination of the financial performance during the period 2000–2007 reveals, despite initial revenue growth, all key financial metrics (i.e. own equity growth, assets growth, and productivity growth expressed as operating profits/employ) of PPA since port devolution continued to deteriorate (Pallis & Syriopoulos, 2007).

Political interference was relevant, especially as ports continued to be places to exercise social policies. PPA was obliged to spend almost 20% of its annual income to provide pensions to 1800 retired port workers (Psaraftis, 2005). A self-governed Hellenic Ports Association (ELIME) was established in 2003 in order to promote port collaboration and knowledge sharing between the 12 PAs. It was dissolved after the 2004 elections and in mid-2006 the Ministry of Mercantile Marine (MMM) re-imposed 'direct rule'. Another governmental change in 2009 led to the reestablishment of ELIME. The dominance of 'non-port' priorities was evident when the proceeds of PPA and ThPA IPOs (54.2 million and 15.2 million Euros respectively) were not granted to ports to finance investments, but went entirely to the Greek state for other purposes.

Disputes between port and local authorities also emerged. With port authorities historically operating extensive parcels of land, in too many cases local authorities demanded a redesign of port zones. This demand delayed further the development of master plans by the newly formed port entities, and the same reason contributed to encouraging local authorities to seek to retain control of an extensive list of secondary ports. In the case of secondary ports, local authorities undertook port management, replacing boards with appointees of the local administration; the objective being a more efficient utilisation of available funds so as to benefit the local community.

Limited structural reforms to the Greek economy restricted further the reorganisation of the ports of national interest. Throughout the 2000s the public sector remained intact, as the overall support for the existing regime and resistance to private involvement in services offered by the public sector was sustained.

In ports, the presence of a highly unionised labour force led the government to withdraw from the initial reform agenda the potential for any third party involvement in the provision of port services. The decision was facilitated by two initiatives of the European Commission, the publication of a Green paper on seaports (CEU, 1997) and the subsequent proposal for a Port Services Directive (CEU, 2001) stating the intension to open access to port services markets in EU ports with international traffic. By adhering to EU-level decisions, the Greek government would minimise political costs (Pallis & Vaggelas, 2005).

3. Second round of port reforms 2008–2016

3.1. The first ever terminal(s) concession

As the formulation of EU policies proved to be remarkably slow and the dynamics of the economic context intensified adjustment pressures, the national port policy agenda changed. This second round agenda turned to a monothematic one, with the single purpose being the introduction of global operators to operate container terminals in Piraeus and Thessaloniki. In combination, these terminals handle more than 95% of the country's container traffic.

The seeds for future concessions had been planted in 2001, when new laws stipulated the signature of a 'concession contract' between each of the corporatised ports and the Greek state. These contracts recognised each port corporation as the exclusive entity to exploit the port's facilities, under prescribed terms and obligations including the payment of a yearly concession fee. For PPA and ThPA the duration of the contract was set to 40 years and the fee at 1% of the port's gross turnover for the first three years and 2% afterwards.

Applying what is common port practice in many countries (see contributions in Notteboom, Pallis, & Farrel, 2012) lasted a five-years process. Shifting decisions regarding the awarding process and the exact content of the concession marked this period. Finally, the Greek Parliament ratified a PPA-COSCO Pacific contract awarding the latter the rights to operate and develop the existing Piraeus container terminal (Pier II) and construct and commercially utilise a new terminal (Pier III) in 2009. The concession would go hand-in-hand with the construction of a third terminal (Pier I) to be operated by PPA; before 2009 PPA operated Pier II terminal. The tendering process was first announced in 2007. However it had been put on hold following strong opposition and repeated industrial actions by militant port unions, representing all (former and current) civil service personnel in Greek ports.

PPA enjoyed limited freedom to develop port level guidelines, as the national government endorsed a hands-on approach regarding the scope and process of the terminal award. The call for tenders limited potential candidates to well-funded global players, or consortia formed by them, as the Greek government put forward a call that prioritised the experience of the operator, its financial solvency, minimum throughput guarantees per year throughout a 35 + 5 years duration of the concession. It also envisaged the construction of a new terminal that would increase the capacity of operations to 6.7 million TEUs per year.

Piraeus Container Terminal S.A. (PCT), a wholly owned subsidiary of COSCO Pacific took up the concession pursuant to the terms of the agreement. Beyond the one-off initial payment, the initial concession contract foresaw an annual concession return, which is a percentage of consolidated revenues and subject to a guaranteed minimum annual payment; an annual lease, related to the length of the berthing dock; and a second annual lease concerning the surface of quays (for exact details: Psaraftis & Pallis, 2012).

Trade unions and the prefecture of Piraeus questioned the legitimacy of the entire procedure. They also challenged the provisions of the concluded agreement. The agreement stipulated, among others, that PCT would enjoy specific income tax exemptions and that its VAT and depreciation obligations would be more favourable when compared with those of a Greek corporation. Accumulated losses could be offset by taxable profits of later periods without any time constraint. Such provisions were not included in the tender nor in the contract itself, but in the law that governed the contract. Since PPA was not subject to these provisions, one could wonder if competition between the two entities would be fair. These provisions also drew the attention of the European Commission, which asked for clarifications so as to ascertain whether these provisions were compatible with EU competition law. With the European Commission concluding the enquiry objecting these provisions, the Greek government reviewed them in November 2016 so as to avoid any penalties for not being in compliance with this law. As a result, PCT SA had to return all funds resulting from the aforementioned provisions since the day of the EU decision (March 2015).

Notably, the institution that granted the concession was the State rather than the port authority. The same happened in the case of all other port governance changes, as in all cases the Greek Parliament had to vote in favour of them. In the early 2010s, a fact finding report of the European Sea Ports Association recorded that in the majority of the EU port (73%) the responsible institution for proceeding in concessions is the port authority (ESPO, 2016).

3.2. Implications of the economic crisis (2010–)

The global and the national economic contexts affected the port governance regime as much as port policy priorities per se.

The call for tenders for the operation of the container terminals in Piraeus and Thessaloniki coincided with the advent of the 2008 global financial crisis. The changing approach of investors in ports—who, in the pre-2008 period were offering large amounts in order to gain the rights to operate container terminals (Rodrigue, Notteboom, & Pallis, 2011)—was soon to become evident. The highest bidder for Thessaloniki port's container facilities (Hutchison Port Holdings) withdrew its interest and the tender was declared void due to the global economic downturn and the difficulty of banks to finance Hutchison's ambitious plans.

For many, the successful completion of the concession of the port of Piraeus happened because COSCO Pacific had offered a more realistic amount for the concession. For others, this happened because of the geopolitical advantage that the operation and potential of the Piraeus port offered to the Chinese government owned shipping conglomeration.

In the beginning of 2010, when the operation of the port of Piraeus by a private party was just three months old, the crisis hit the Greek economy in the most severe way. Realising the size of the public debt, the Greek government and a *Troika* of international institutions (IMF, European Commission, European Central Bank) agreed to a bailout program along with a set of austerity measures. All details of the program were included in a MoU signed by all parties. Yet the slow progress of structural reforms, including delays in any form of privatisation in any sector of the economy, led to a second MoU, signed in the beginning of 2012.

Ports became immediately part of the structural reforms program, without any pre-determined discussion on ownership. This is evident when comparing the relevant provisions included in two MoUs (Table 2). While the sale of minority shares was on the table, the potential for Greece to follow the landlord model (concessions to port service providers) or the private ports model (sell ports) remained for the Greek government to decide. The need for balancing the budget of the

Table 2
Provisions of the structural reforms programs of the Greek economy.

MoU I	MoU II
1) Sell shares: 23.1% of Piraeus; 23.4% of Thessaloniki; (State retains 50.01%). 2) Greek government to either sell the rest of the shares or to concession rights to operate ports and provide services 3) Hellenic Republic Asset Development Fund (HRADF) to organise and execute the privatisation of all different sectors including ports	1) Sell shares: 23.1% of Piraeus; 23.4% of Thessaloniki; (State retains 50.01%) 2) Annex II: "Government to concession rights to operate in all 12 port Sociétés Anonymes as well as in smaller ports" 3) Government defines a strategy to integrate ports into the overall logistics & transport system, specifying the objectives, scope, priorities & financial allocation of resources. The strategy ensures the implementation of TEN-T priorities and the establishment of the foreseen corridors. It will also ensure the efficient use of the assigned Structural and Cohesion Funds

Sources: MoU I—First Economic Adjustment Programme for Greece (2010); MoU II Second Economic Adjustment Programme for Greece (2012).

State, as well as disagreements between the international institutions on the desired model (the IMF was in favour of selling the shares of corporatized port authorities, and the European Commission and the European Central Bank preferred the concessioning of operators to third parties with the port authorities remaining under public control) led to the ambiguity in the details of the preferred governance form. Evident, however, was the need for not limiting changes to the biggest port only, as well as to integrate ports into the broader transport and logistics chains.

The government introduced a new agent, the Hellenic Republic Asset Development Fund (HRADF), to organise the privatisation program, whereas the Ministry of Shipping—General Secretariat for Ports and Policy (GSPP) would monitor the process and develop the national port policy. The state owned shares of the 12 port Sociétés Anonymes (SAs) were transferred to HRADF, as were the voting rights. HRADF introduced major projects to study the optimal reorganisation of the port portfolio, acknowledging the need for a different treatment of the 12 ports of national interest and the remaining secondary Greek ports. The coordination of port development with the broader transportation plan (national level decisions) and the clarification of the regulatory functions of PAs were the first issues in discussion. Second was to extract regulatory activities from the PAs to an independent 'national port regulator', or regional port authorities (see text below). For the moment the only change implemented is the one referring to the selling of the majority shares of the Piraeus Port Authority—this change as well as the recent establishment of additional institutions to monitor the operation of Greek ports is discussed in the following context of the paper.

In a context of inertia, the target of the program to improve, among others, the financial performance of the operating corporate entities has not achieved. Rather than the revenues of the 12 corporatized ports have deteriorated (Table 3). In the pre-crisis period (2005–2010), corporatized Greek ports experienced an increase in their revenues, and earnings before taxes and amortisation (EBTDA). The exception was PPA, where the container terminal contributed almost 75% of revenues and 50% of the earnings EBTDA as, in a period of booming maritime trade, the biggest port of the country failed to generate additional income. This was partly due to the transition of the container operation to a new model (including the need to absorb labour that was working on the container terminal, but not transferred to the private operator), and partly due to the long and repeated industrial actions that accompanied the plans to concession the container terminal to a third party.

A downturn in revenues accompanied the economic crisis period that commenced in 2010. However, the EBITDA increased and this has been the result of both non-port decisions and port related developments. The former include the reductions in expenses, including wages that were imposed as part of the country's austerity measures and bailout programs. The number of port employees was reduced, and retirement and pension schemes for civil servants were reformed. As regards port related developments, the investments undertaken by PAs since 2010 are substantially lower than those of the immediate past decade. Decreased public spending and uncertainty regarding the levels of engagement of the private sector in the Greek port system were the major reasons for this trend. The only exception is the private operator, PCT, which continues to invest heavily in order to upgrade the existing infrastructures and construct a new container terminal in Piraeus.

A number of factors, including the lawsuits that followed the concession of Piraeus and industrial actions against further third party involvement in Greek ports, delayed any progress. Outstanding operational issues—such as pricing, essential infrastructures, rail connections, and logistics contributed to inertia. Social unrest and a declining national economy (the Greek GDP of 2015 was 25% lower than that of 2010) did not help either.

In this context, PPA and PCT were engaged in post-contract renegotiations, in order to reform certain terms of the initial agreement. Two friendly agreements were signed in 2012 and 2015 respectively. Key provisions included the relations with other users (i.e. the need to finance the relocation of oil companies using the port in order to facilitate growing container business), and amendment of the payment terms in the light of the changing economic context (i.e. withdrawing the presence of a minimum annual guaranteed payment). In the meantime, PPA and port unions renegotiated salary and working rules in the light

Table 3
Financial performance of the Greek ports (2005–2014) and GDP change.

	PPA	ThPA	PCT[a]	Other ports of national interest
Revenues 2005	€ 139.978	€ 47.462	–	€ 26.382
Revenues 2010	€ 116.721	€ 49.617	€ 62.752	€ 35.380
Revenues 2014	€ 104.320	€ 56.280	€ 134.929	€ 31.118
% change '05–'10	−16,61	4,54	–	34,11
% change '10–'14	−10,62	13,43	115,02	−12,05
GDP change '05–'10	15,13			
GDP change '10–'14	−16.74			
EBITDA 2005	€ 26.934	€ 8.188	–	€ 4.271
EBITDA 2010	€ 26.653	€ 10.381	€ −4.772	€ 7.029
EBITDA 2014	€ 21.969	€ 29.424	€ 44.184	€ 7.613
% change '05–'10	−1,04	26,79	–	64,57
% change '10–'14	−17,57	183,43	–	8,32

Notes: All amounts in '000 Euros; unless referring to percentages.
Source: Compilation of data reported in the annual financial accounts of the respective entities, as presented in: Vaggelas and Pallis (2016).
[a] PCT's first full economic year was 2010.

of the austerity measures applied to the public sector in Greece and the potential of further privatisation. Yet, despite the archaic labour rules applied in Greece (see also: Pallis, Farantouris, Katsafouri, & Papachristou, 2013), the progress insofar as labour rules are concerned was minimum.

3.3. The 'master concession' privatisation for the two major ports (2016)

HRADF proposed in 2014 a plan, the cornerstone of which was the sale of 67% of the shares of PPA and ThPA, the two state owned entities that were formed a century ago in order to govern and operate the respective ports. As these entities perform the dual role of port authorities and port operators this is a de facto selling of the port. Yet, given that the port land is owned by the State, and technically has been 'concessioned' to these entities since the early 20th century, these entities are considered, *de jure*, as concessionaires.

An international tender for the selection of the preferable investor for PPA SA was completed in January 2016. Although six parties expressed an initial interest, only China COSCO Shipping Corporation Ltd. placed a bid at the final stage. They offered € 368.5 million (€ 280.5 million for buying the 51% of the shares at the first phase) and committed to € 350 million investments within a decade. The Greek State will retain about 8% of the shares. The Greek Parliament endorsed the agreement signed between HRADF and China COSCO Shipping on July 2016. As regards the selling of the shares of the Thessaloniki Port Authority S.A., the corresponding bidding process is expected to conclude in 2017 with six bidders participating at the final phase of the tender.

In effect, this equates to a high ('almost full') degree of privatisation. The fact that the right to use the assets is technically valid only for the duration of the concession, the land is still owned by the State, and the government has the right to terminate the concession under certain conditions, restrict us from calling this 'full privatisation'. However, as it is only land ownership that is not transferred, the importance of the preceding terms is limited as the assets are not transferred to the private sector in perpetuity, and cannot be sold again without restriction. In all other terms, the public port authority is replaced by this entity acting as owner, regulator, manager and operator of the whole port. This is a rather rare port governance prototype, at least in European terms. The 'master concession' privatisation is a choice rarely made, and mostly applied in developing countries (e.g. El Salvador; Honduras), and countries returning to open economy (like in West Balkans). That said, there are recent deals in developed countries, e.g. Australia, that resembles the master concession model.

The selection of a port governance model based on the sale of the entity owning the 'master concession' was a political decision, in particular a reaction to the pressures posed by the accelerated economic crisis and the delays in proceeding with further engagement of the private sector in the economy. To understand the degree of flexibility that the Greek State had when deciding the way forward, one needs only to compare with the choices made in Cyprus, another EU member state that implemented a bailout program subject to a MoU with the very same international institutions and opted to proceed with a concession of port services to private companies.

A number of issues emerged during the tendering process. These included the exclusion of parts of the port zone from the PPA's jurisdiction, the revision of the concession agreement between PPA and the Greek State so as to align with the tendering process time frame, and the search for a new—regulatory only—PA. Whereas the first two issues were resolved, the latter proved to be far more controversial (see Section 3.6). The second, most controversial issue is the provisions for the existing workforce; once again, decisions for any port labour reform remain pending.

3.4. Trends in the container port market (2008–2016)

Of the 12 ports operating as corporate entities, seven facilitate container trade, nine serve bulk traffic, and four liquid bulk cargoes. Table 4 details the evolution of the containerised traffic in ports of national interest since their transformation to corporate entities.

The concession of the container terminal of PPA has been followed by a significant increase of the concentration in the container port market in Greece. In 2010, PCT held a market share of 45.3%, PPA a 34% market share and ThPA a 18.1%. Five years later, in 2015 the PCT market share has increased to 81.5%, with PPA and ThPA shares decreased to single-digit ones (the ThPA market share is 9.4% and the PPA market share is 7.9%).

Since PCT commenced operations in Piraeus in 2009, the port experienced a major increase in container throughput mainly due to the increase in transhipment traffic. When the Greek GDP lowered by 25% (2010–2015), Piraeus raised from a nontop-15 European container port in 2007 to the 8th biggest one in 2015. Overall, the impact of the arrival of COSCO Pacific as a terminal operator is catalytic.

A vital question is on whether throughput developments in the case of COSCO can be attributed to the change of the governance of the port. It is too early to assess the implications of the selling of the master concession, as this was completed only in August 2016.

On the one hand, there are a number of indications that the concession of the Piraeus Pier II terminal has worked in favour of

Table 4
Evolution of container throughput in 12 ports of national interest (in '000 TEUs).

	PPA SA		PCT SA		Total Piraeus		Thessaloniki		Other ports of national interest		Total	
	000 TEUs	Annual growth	000 TEUs	Annual growth	000 TEUs	Annual growth	000 TEUs	Annual growth	000 TEUs	Annual growth	000 TEUs	Annual growth
2002	1.405		–		1.405		240		16		1.661	
2003	1.605	14%	–		1.605	14%	269	12%	36	125%	1.911	15%
2004	1.541	−4%	–		1.541	−4%	336	25%	18	−50%	1.896	−1%
2005	1.394	−10%	–		1.394	−10%	366	9%	31	72%	1.790	−6%
2006	1.403	1%	–		1.403	1%	344	−6%	41	32%	1.788	0%
2007	1.373	−2%	–		1.373	−2%	447	30%	51	24%	1.872	5%
2008	433	−68%	–		433	−68%	239	−47%	108	112%	781	−58%
2009	665	54%	166		831	92%	270	13%	46	−57%	1.147	47%
2010	513	−23%	685	313%	1.198	44%	273	1%	40	−13%	1.511	32%
2011	491	−4%	1.188	73%	1.679	40%	296	8%	36	−10%	2.011	33%
2012	626	27%	2.108	77%	2.734	63%	318	7%	41	14%	3.093	54%
2013	644	3%	2.520	20%	3.164	16%	322	1%	39	−5%	3.523	14%
2014	598	−7%	2.987	19%	3.585	13%	349	8%	41	5%	3.975	13%
2015	293	−51%	3.034	2%	3.328	−7%	351	1%	44	7%	3.723	−6%

Source: Data provided by respective port authorities; all measurements in '000 TEU.

throughput growth. First, PCT has proceeded to an extensive investment program. The period 2010–2015, the total of PCT investments reached € 341.6 million, including the purchase of super-post panamax type cranes that enable servicing mega-vessels, and several equipment that allowed a major upgrade of its stacking capacities at Pier II terminal and vessel productivity beyond 4000 container boxes in 24 h. In comparison, over the same period, PPA invested € 73.2 million, and the rest of the 10 ports of national interest just € 28.5 million.

Second, being the major foreign direct investment in the country, the arrival of COSCO Pacific proved to be an accelerator of completion of the state-owned rail installations at the port zone. A long-waited completion allowed PCT to sign long-term contracts with multinationals (i.e. Hewlett Packard) to transfer containerised intermediate products to distribution and assembling centres in Europe.

Third, and inextricably linked with the two preceded arguments, PCT has signed agreements with major alliances, and thus diminish the levels of dependence from a single user (i.e. MSC). Today, beyond 2M (in which MSC participates), the port hosts a number of vessels operated by members of G6 Alliance and CYKHE. While merger and acquisition activity (e.g. COSCO's merger with CHCL) and changes in consortia arrangements contributed towards this direction, the contrast with development in the rest of the Greek ports, even PPA terminal is apparent. On the contrary, at the same time though the terminal that was operated by the public owned PPA started losing market share since 2013. The major reason for the latter has been the dependence of the terminal on a single operator, and the choice of this operator (MSC) to move container volumes from the PPA operated terminal to the PCT operated and other container terminals in the region.

On the other hand, some other causes independent of changes in governance arrangements, worked in favour of throughput growth. One might cite, for example, the general growth in transhipment in the East Mediterranean during the period under review, or the changes in East Mediterranean shipping patterns. Developments, or absence of them, in nearby ports, might have also an effect—for example, the delays to MSC's plans to build a new transhipment hub in Turkey, which would have taken traffic away from Piraeus, the move towards full capacity working at Suez Canal East, that was previously COSCO's main transhipment hub in the East Mediterranean, problems at Gioia Tauro in Italy. It cannot be ignored however that PCT managed to take advantage of the 'window of opportunity' that was created by this conditions, whereas the immediate past period PPA, and other ports in Greece, had completely failed to benefit from similar opportunities.

While on the basis of the above indications, there are strong suggestions to support the positive effects of the decision to proceed with a concession of a container terminal to a terminal operator, a definite conclusion would demand further evidence. As the model has already changed, it is only the concession impact in the short-term of seven years (2009–2016) that would be possible to be evaluated, any future developments would be the result of an entirely different port governance regime.

The impact of the progressing governance changes is inconclusive as regards other port markets. Taking dry bulk cargo throughput as an example, it is notable that the total in all 12 ports decreased since 2009 (Table 5). The results of the financial crisis proved to be substantially more significant than any port organisation and/or governance improvements. Industrial production in Greece decreased, with a direct impact on the imports of raw materials. Notably, Thessaloniki dominates the dry bulk market with its market share rising from 49.8% in 2010 to 68.2% in 2014; other ports with significant shares are Volos (11.3%) and Piraeus (6.7%). It remains to be seen whether, and how, any change of port governance—i.e. the master concession of the port of Thessaloniki—might have a major structural impact on the specific port market or not.

Table 5
Evolution of dry bulk throughput in 12 major Greek PAs ('000 tonnes).

Year	Piraeus	Thessaloniki	Other ports of national interest	Total
2005	314	3.527	4.437	8.278
2006	435	3.765	4.766	8.967
2007	583	4.565	4.606	9.754
2008	421	4.308	5.175	9.904
2009	654	3.427	4.541	8.622
2010	578	4.045	3.493	8.116
2011	408	3.593	1.967	5.968
2012	382	3.869	1.893	6.144
2013	481	3.813	1.633	5.927
2014	425	4.342	1.596	6.364

Source: Data provided by respective port authorities.

3.5. What about secondary non-corporatised ports?

With Greece being a country with an extended coastline, the port system also includes almost 900 port installations. Following the corporatization of one more port authority, ports of Evoia, in 2013 (Law 4150/2013), there are today 13 port authorities operating as corporate entities, three 'Port Funds' operating at regional level, 69 'Municipal Port Funds' operating at municipal level, as well as two local port offices that are also in operation.

While Port Funds were established the first reform period (2001–2004), the second wave of reform took place since 2010. Municipalities pushed the State to give them control of local ports. This initiative is associated with the consideration of these ports as money generators, especially as the assigned extensive port zones provide opportunities for non-port activities (i.e. real estate activities, shop rentals). When the State reformed the Law defining the responsibilities of local authorities, it allowed the formation of local port entities. As a result, several Municipal Port Funds were established in recent years. For a notable number of port installations (e.g. those demanding investments and modernisation of infrastructures without providing returns from non-port activities) the interest is limited; in these cases, there is no institution to manage them, and decisions are taken at national level.

A discussion regarding future governance reforms is already on going. The developed agenda focuses on the need to merge governing bodies of different ports. The aim is to secure the effective allocation of the limited funds available to develop port infrastructure, the reconsideration of existing local master plans of adjoining ports that in many cases seek to develop similar facilities, the overcoming of the difficulties resulting due to the absence of adequate (in terms of numbers and qualifications) administrative personnel to secure daily operations and long-term planning, and the lack of long-term planning that is produced by city councils with little, if any, knowledge on port planning and operations. Proposals for a major reform are already developed. The Regulatory Authority for Ports (RAL) has already discussed alternative options to proceed (i.e. the establishment of regional corporate entities to govern secondary ports—Pallis, Tzannatos, Kladaki, Kontaxi, & Styliadis, 2016), without yet concluding to any concrete proposals.

3.6. Monitoring port governance

Aiming to monitor port governance, in 2014 (Law 4150/2013) Greece established a national—level Regulatory Authority for Ports (RAL in Greek). Initially formed as a public body operating under the control of the Ministry of Shipping and Island Policy, RAL was converted in 2016 to an independent economic regulatory authority financed by ports and the State (see Vaggelas & Pallis, 2016). It is responsible for (a) supervision of legislation compliance; (b) monitoring and controlling the functioning of port services provision; (c) proposing measures for the application of competition principles; and (d) the supervision of the licensing of port commercial service providers (Law 4389/2016). RAL is also assigned the tasks of defining the framework for port charges, identifying and investigating infringements of relevant legislations, and ensuring compliance with state aid legislation to guarantee the satisfactory operation of port markets.

The government also established in mid-2016 a Public Authority for Ports (PAP), a separate and independent organisational body under the Ministry of Shipping and Island Policy, with ambitious objectives. In legislative terms, PAP will work to secure (a) the contribution of Greek ports to local, regional, and national communities in accordance with the key and macro-economic importance of the respective port; (b) environmental protection in port areas, in line with the applicable legislation; (c) the uninterrupted availability and provision of reliable and quality services by port operators to ships, passengers and cargo; (d) the upgrade of the level of services provided to users, in cooperation with the RAL and the General Secretariat of Ports, Port Policy and Maritime Investments; (e) the cooperation of all relevant bodies for enforcement of labour rights and union freedoms in the port area; and the application of any other relevant legislation within the port area (Law 4389/2016).

While PAP is responsible for the entire port system, a regional office the "Public Authority of Piraeus Port" (PAP-Piraeus) has already been announced. The aim of PAP-Piraeus has been formally assigned the tasks to supervise and safeguard the provision of public goods at the port of Piraeus, and it will be funded via a transfer of 1/7 of the amount received annually from private economic operators. The way that these tasks will be performed is still unknown, as the establishment of this authority is in progress. Following the sale of the respective port master concession(s) regional branches will be established in Thessaloniki and any other privatised port.

Beyond the recently established RAL and PAP, the Ministry of Shipping and Island Policy remains involved. Via its General Secretariat for Ports, Port Policy and Shipping Investments (GSP&PP&SI), the Ministry authorises every aspect of port governance. In all port but Piraeus, it is involved in planning, as well as in operational issues, such as the final approval of the port tariffs set by port authorities, the approval of any port infrastructure investment, the appointment of BoD members or other port directors.

Fig. 1 summarises the discussed structures of the governance regime in place. Comparing the discussed tasks, the conflict of interests between the various levels of port governance is evident. Several PAP responsibilities overlap activities that are detailed in the respective law establishing RAL.

These structures are expected to change further, after the privatisation of the master concession of Thessaloniki is completed and the PAP Thessaloniki Branch is established. The HRDAF also remains active as the holder of the shares owned by the Greek state and the institution responsible for the orchestration of further privatisations. Additional public authorities are also involved; for example, the Ministry of Tourism is responsible for the planning of tourist ports and marinas.

4. Lessons extracted from the Greek case

The devolution of management responsibilities to newly created corporate entities and that Greece has developed some unique port governance in features in the process, are not surprising. In many countries port governance is marked by the desire to involve private actors more than before and devolve powers to port level. Empirical studies conclude that, for port governance, "the 'perfect model' is a myth" (Brooks & Pallis, 2011); 10 years ago scholars examining port governance in 14 countries culminated in the publication by Brooks and Cullinane (2007) with the conclusion that there are almost as many models as there are ports.

Nor is a surprise that Greece's attempts to streamline port governance resulted in a distinctive approach for ports of 'national interest' with a different one for secondary ports. It has already happened elsewhere (e.g. France—Debrie, Gouvernal, & Slack, 2007), as smaller ports face very different conditions and challenges than those that confront the largest international ports.

What seems to contradict existing notions however is the ease with which Greece departed from the initial choice to attempt the application of generic port governance models developed at international level, i.e. the one developed by World Bank (2000) building on the work of Goss (1990), de Monie (1994) and others, and leading reforms

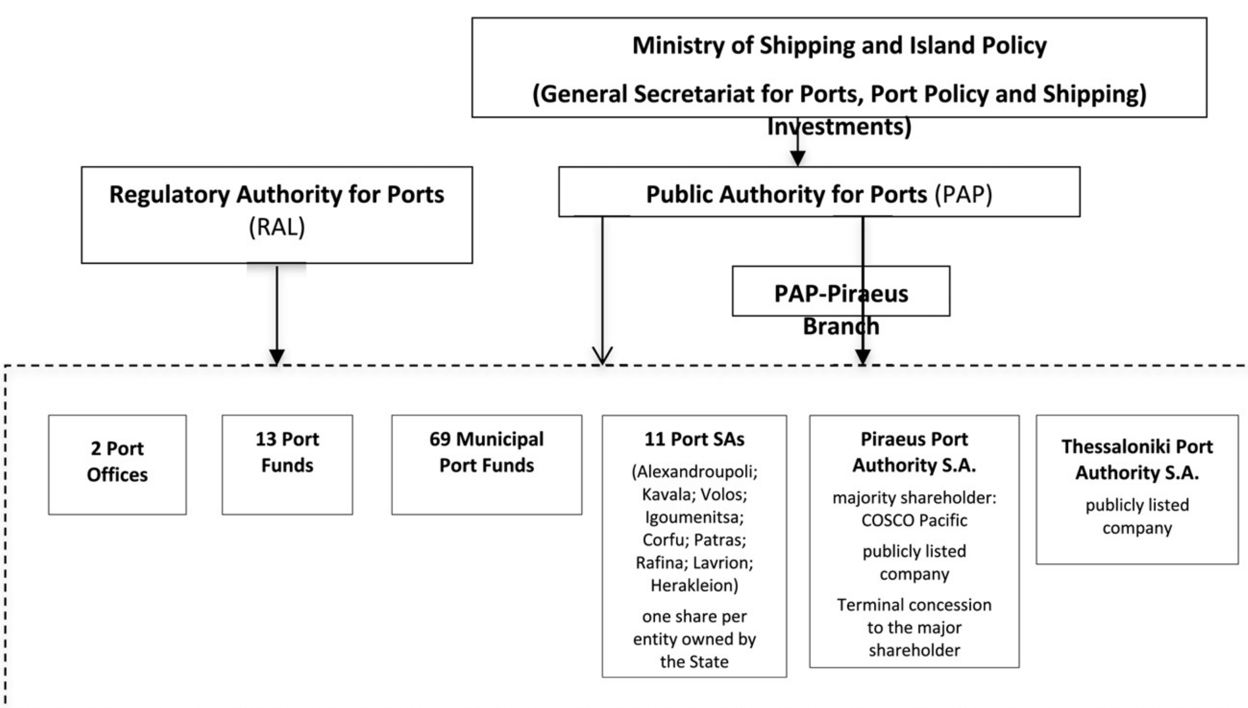

Fig. 1. Structures of port governance in Greece (2016).
Source: Authors.

in many countries. The widely endorsed landlord port model is the one marked by publicly owned corporatised port authorities with improved performance (de Langen & Heiz, 2014), and a boom in the number of terminal concessions (Farrell, 2012), fuelling aggressive expansion by global terminal operators (Olivier, Parola, Slack, & Wang, 2007; Parola, Satta, Persico, & Bella, 2013).

Greece initially strived to follow this model. However, it soon opted for selling 'master concessions'. This option contradicts the usual European model defined by the dominance of port concessions and publicly owned port authorities performing regulatory functions (ESPO, 2016). The Greek pattern implies a private control of the authorities responsible for the strategic management and development of the international ports of the country. Private owners of the Port of Piraeus authority, and, according to the existing plans, those of Thessaloniki and potentially other ports, have the power to make all decisions as regards planning, managing, and operating the respective port.

The institutional setting had a major contribution to this departure. The political traditions have produced an interventionist state, featuring short-term plans, slow progress of change in the public sector domain, widespread participation by labour in trade unions and a militant stance by the well organised trade unions representing workers in the public sector. The economic setting proved equally deterministic.

Path dependency created lock-in effects, yet what has been termed as institutional plasticity in port governance reforms (Notteboom, de Langen, & Jacobs, 2013) has been present, following the need to develop new capabilities and activities emerged. New layers of bureaucracy were added, gradually leading to a formalised governance reform, but without breaking out of the existing path of development. When investment and financing issues imposed limits on options available to the Greek administration, governments of different political orientations stand at a 'critical juncture' and dependency on the path already shaped became of secondary importance. When economic pressure mounted, decision-makers did not hesitate to develop a 'prototype' that in many respects is both different and unique. Unfortunately, it does not have clear lines of accountability and responsibility, in either the regulation of the management of ports.

The presence of several institutions, operating at different level (national/regional/local/port) created a more complex and more bureaucratic port governance prototype than before. Long-term planning is difficult and delays in major projects are common; a number of projects have been inaugurated several times since the 1990s, yet relevant construction has yet to start, waiting for further governance changes. A new generation of port managers is appointed following each general election (i.e. the last decade such change at the top (President and CEO) of the corporatized port entities took place in 2005, 2009, 2012, 2015), with each change resulting in a restart of port planning.

Comparing the decisions taken and implemented in the case of Piraeus, and the port governance regime that is present in the case of all other ports, the presence of a dual-strategy is evident. One the one hand, Piraeus is subject to a 'high degree' of privitisation. On the other hand, the management and administration of the rest of Greek ports, irrespective of whether they operate as corporatised entities or public authorities, remain subject to governmental decision.

Today port authorities experience a renaissance (Verhoeven, 2010); going beyond the traditional landlord functions (van der Lugt, Langen, & Hagdorn, 2015), they act as cluster managers (Langen, 2004) and develop internationalisation strategies (Dooms, van der Lugt, & De Langen, 2013). Yet, the Greek prototype, at least as applied in Piraeus and will soon be applied in Thessaloniki, goes as far as to challenge the very essence of the seminal Goss (1990) argument that "port authorities are necessary". Despite the aim to open the market, the choices made during the design and the selling of master concessions, created entry barriers (see: de Langen & Pallis, 2006) that limited participants at the final stages of the respective tenders. All these are in line with evidence ranging from Singapore (Airriess, 2001) and Dubai (Jacobs & Hall, 2007) to Baltimore (Hall, 2003) and Los Angeles/Long Beach (Jacobs, 2007), Busan and Rotterdam (Ng & Pallis, 2010) and suggesting that institutional conditions restrict port governance choices and lead to diversified development trajectories. Clarity of vision about the roles of private and public sector actors underpin model implementation.

5. Implications for managerial practice

Evidently, port reform and the alteration of a governance model, either at national or at port level, might be a lengthy procedure (Brooks & Pallis, 2008). A concrete long-term pattern might take more than two decades to be established, thus planning by all (i.e. decision makers, port authorities, port users and other stakeholders) must take a long-term perspective rather than focusing on short-term outcomes or mid-term benefits.

A long-lasting process might produce unforeseen challenges. The lengthy time needed for port reform to complete might create a 'window' for non-port factors to affect the whole process and its outcome. In the Greek case the factors that derailed implementation included both the global and national financial crises. To tackle this issue, stakeholders should be ready to adapt their strategies even when the port reform is already in progress.

Usually, a port reform aims at creating a more flexible, efficient and competitive port system. Despite such intentions, it might produce (at least temporarily) a more complex and bureaucratic model. Instead of serving intentions to devolve powers, the legislative normative devolution might not imply in practice decentralised port governance; national administrations might still create monitoring entities that in practice recentralise the devolved powers in almost every aspect of port management and planning.

Intentions to open the market for services provision might not be enough for increasing the number of service providers. The selected privatisation model of major Greek ports might lead to the presence of few, de facto dominant, players in the local or regional port market, whereas the major player of all is the owner of the Port Authority operating the biggest port of the country and the operator handling approximately 90% of container throughput.

This is not a priori a negative development. Yet, it is a prospect demanding the presence of continuous monitoring and effective mechanisms that secure public interests, standing at the same time beyond the general ones (safe working conditions, non-discrimination, road safety). For ports and their users, nautical safety, minimising negative externalities, securing sufficient competition and market access, creating a level playing field, undertaking port development initiatives, and effective land use, remain all important and positive R&D externalities for the continuity of port operations.

Conflicts might also emerge within the structures of the new port governance framework. This is not only because private PAs prioritise entrepreneurship. It is also because port users have to interact with private entities performing the role of both authorities and operators. Whereas the private PA does not necessarily provide sufficient commitment to secure public interests in port development, the Greek prototype implies the losing of any public sector power to intervene in what is the institution responsible for the oversight of strategy and the development of modern ports. Thus, the recently established institutions, and not least stakeholders themselves, need to develop and facilitate mechanisms that enable the presence of efficient and effective port operations, while effectively securing public interests, as well as the interests of a broader group of stakeholders.

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