

THE DESIRED ROLE OF PRIVATE SECTOR AND SEAPORTS GOVERNANCE WITHIN SDGs: CASE OF MAGHREB REGION

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Abstract

Fundamentally, to achieve United Nations Sustainable Development Goals (SDGs), seaports need significant improvement through different ways. The Maghreb countries are situated in the middle of the northern coast of Africa or South Mediterranean sea, it could benefit from their strategic location. Although, its seaports suffer from lack and or insufficient of infrastructure and superstructure this is due to their ownership structure as most of them are public port model, this paper aims to describe sustainability and its dimensions in seaport sector. Also, to present seaport management models, as well as, it aims to discriminate between these models and its advantage and disadvantage, It also aims to provide a comprehensive description of seaport types, ownership structure and roles of seaport authorities and how to apply SDGs in this sector. Two cases study are used to analyze and to clarify the main challenges which will face the governments to attain SDGs. The paper outcomes tend to simplify differences between seaport management and governance models and its tools and to clarify how can apply these tools on the ground.

Keywords: Maghreb countries, seaport, governance tools, devolution, public, private and SDGs

1.0 INTRODUCTION

Maghreb seaports operate in a competitive environment. However, they are faced to many challenges to achieve sustainable development, especially in term of connectivity and infrastructure [1]. Therefore, the implementation of sustainable transport solutions is dependent on the public authorities' willingness because they

cannot act alone. Moreover, it involves implementing public policy tools that are likely to incorporate the greatest number of stakeholders. In addition, ports are becoming increasingly capital-intensive industries and increasing fiscal needs have led many countries to seek private participation in seaports. The privatization intended to modify the balance between capital

and labor at seaports. In short, there are main three reasons behind seaport management and hand over control from the public sector point of view: first, because they are restricted to competition and lead to increase port services. Second, to keep ports always competitive. Third, to make ports more profitable commercial ventures or more economically valuable assets. Over the past few decades governments around the globe have initiated privatization programs for various purposes. It is including improvement of economic efficiency and productivity, the need to raise revenue or reduce government budget deficits, and development of the financial market [2]. In this way, as an exploratory study, this study is considered as the first attempt try to evaluate the progress of seaport devolution in the Maghreb region from Libya to Morocco. Thus, this study will analyze the previous studies on the port privatization (partnership) related to the stated region, then it will provide the advantages and drew back of the analyzed experiments, as well as, this study intended to rich literature in this matter.

Regarding structure of this paper, it organized as the following: Section Two devotes to review the related literature to seaport reform/devolution which including number of fresh systematic studies, as well as, port reform tools (forms) and advantages and drew back of seaport privatization, while gap analysis that clarify shortage or uncovered areas of the reviewed studies will take a place at the end of Section Two as will. It provides also a background on the subject including number of necessary definitions related to this study and an economical role of seaports. Section Three will present methodology which including case studies and proposes a framework for sustainable port governance. Section Four to present study results and discussion, while study conclusion is furnished in the Fifth and final Section.

2.0 literature review

The literature review aims to present and evaluate the body of literature and to recognize the potential research gaps. In this vein, review of literature is conducted to observe development of seaport management over time.

Over the past few decades, many of countries around the world have privatized their seaports, with detailed arrangements of the privatization varying from mere commercialization [2]. The study of [3] examined ownership structure of Libyan ports and how can it be reformed as a Maghreb state. He found a necessity to privatize

the Libyan seaports, because all of them are state operated and owned exclusively by the public companies. He recommended that reforming of Libyan seaports is the key for enhancing seaport effectiveness. At the end of his study, he proposed a theoretical framework for governance structure of Libyan seaports system.

As shown in Table-1 that [4] reviewed a total sample of 118 studies on seaport governance between 2002 and 2018. From the institutional level, they found that seaport devolution and port re-centralization are the main governance tools. This level is generally used by governmental organizations to set the fundamental regulative rules for port governance system, while port co-competition, port regionalization, port integration, stakeholder management strategy, and corporate governance are at the strategical level which applied by seaport organizations in gaining competitive advantages and increasing market share in the long term. At the managerial level which is related to the seaport business operations and management, the port pricing, port concession, port user/customer relationship management, monitoring and measuring, regulatory control, port security management, and information and communication technologies are the main governance tools.

Most recently, and as shown in Table-2, [5] investigate different dimensions of seaport governance practices in a sample of 87 seaports in the Americas and Europe, focusing on behavior of the entities governing ports (port authorities) or government departments involved in the port policy-making.

Table-1 Geographical analysis unit of the selected studies by Qiang et al. between 2002 and 2018

Unit of analysis	Number of studies	%
Global (samples across continents or theoretical work without samples)	33	27.9
International region (samples across countries within a continent)	18	15.3
National (including samples within domestic regions)	59	50.0
Specific port	8	6.8

Source; [4]

They found two aspects to information dimension that is geared more toward the port users and customers, and information as it focused towards the general public. Added to this, the detailing of

best practices through further case studies would be useful to port authorities wishing to improve their governance transparency.

Table-2 The examined seaports by Brook's et al, 2020.

Region	Sub-region	No.	Port Governance	No.
Canada (17)	Eastern Canada & St. Lawrence River	9	Corporatized public PA	17
	Western Canada	4		
	Great Lakes	4		
	Canada	4		
Europe (26)	Mediterranean	11	Public Port Authority Corporatized public PA Listed company public majority Listed company/private majority National Port Authority	15
	North Europe	8		
	Baltic	5		
	Black Sea	3		
		2		
Latin America & Caribbean (21)	South America	12	Public Port Authority (national) Port Authority	14
	Central America	6		
	Caribbean	3		
U.S.A. (23)	Atlantic	8	Public Port Authority	23
	Pacific	6		
	Gulf	5		
	Great Lakes USA	4		

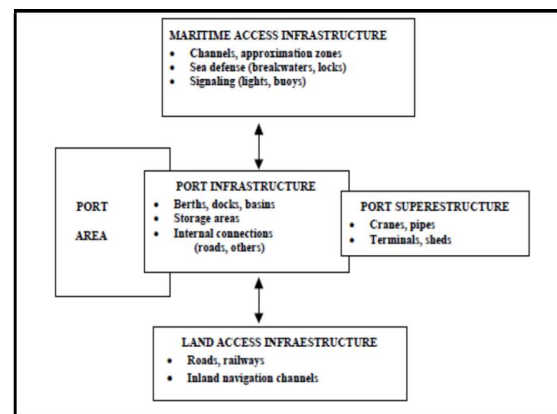
Source: [5]

2-1 Classic Definitions of privatization and seaport and its activities and role in supply chain (SC)

The concept of seaport is developed from a simple interface between maritime portion and land portion before the 60s of the 20th century to a center of transport chain, and then to a commercial and industrial center, whereas seaports are supposed to be a visible manifestation of economic activities, in a period before that globalization of trade and openness. However, [6] defines seaport as a "geographical area where ships are brought alongside land to load and discharge cargo usually a sheltered deep water area such as a bay or river mouth", while [7] defined a seaport as "a single organizational unit that provides a service to ships".

To this end, and as shown in Figure-1, seaport activities are including: infrastructure and services which provided by port and coordination between different activities performed at ports. Seaport services, on the other hand, are including: (1) infrastructure provision, (2) berthing services which including pilotage and towing, (3) cargo handling which contains stevedoring and storage, and (4) consignees that including: administrative paperwork for ships and cargo, permits and service hiring. While, ancillary services are including: supplies, repairs, cleaning, refuse collection and safety and security. On the other hand, [2] defined privatization as "the sale of state-owned enterprises (SOEs) to the private sector or, more generally, the transfer of any government function to the private sector, figures prominently on the policy agenda of many countries, especially developing countries".

Figure-1 Seaport structure



Source: [7]

2.2 Seaports role in the economy and as an added value

The relationship between seaports and regional development can be classified into two categories. The first sees seaport as an engine for economic development, while the second sees seaport as any node whose function is to monitor development. It is a reciprocal action between transport infrastructure and development in general [8] [9].

Away from the classic definition of seaport, and take it from an optimistic approach, seaports are defined as growth poles that allowing productive and commercial activities in order to achieve economies of scale, giving the cities and regions concerned a lasting comparative advantage [10]. This conception is based on economic location and implies theories,

the seaport efficiency lead to increases benefits and port traffic itself, while inefficient ports pushing a country further away or a region of resources or advantageous markets for production[11]. Previous studies have also shown the importance of local and regional multiplier effects in developing countries [12] and further developed by [13]. For this school of thought, the seaport creates wealth and promotes international trade, thus there is a need to maintain seaports infrastructures quality and their connection with other transport systems and modes. The other pessimistic approach calls into question the benefits of port investments [14]. The general idea of the structuring effect of transport infrastructure. Indeed, the local and regional advantages of seaport growth remains limited in the case of seaports, as it far from economic and urban concentrations. On the contrary, improving the delivery of the hinterlands and the efficiency of seaport transit can accentuate the tunnel effect defined by low local benefits despite increase in traffic.

2.3. Seaport management models

The processes of liberalization, privatization and development of the new forms of organizations are modifying the relationship between private and public agents with regard to seaport powers and port services, which leads to seaport management transformation.

Studies of [15]; [16]; [17]; [18] and [19] clarify mutations of seaport roles. In very broad words, changing role of seaport authority in the institutional environment has given rise to new directions in studies of [20] and [21] such as; the adoption of policies for port management, privatization, deregulation and decentralization of transport infrastructure. The study of [4] claimed that the governance tools is related to how to governess.

From seaport efficiency point of view, other authors insist on the need for a reduction of government role, in both levels: planning and management of infrastructure, and as shown in Table-3. This will lead for a better integration in a competitive global economy. In this regard, [4] stated that seaport efficiency and or effectiveness intended to provide what the purpose of seaport governance.

Table-3. Classification of seaports ownership and services.

port management	Infrastructure	Superstructure	Stevedoring labor	Other functions
Public service	Public	Public	Public	Mainly public
Tool	Public	Public	Private	Mainly public
Landlord	Public	Private	Private	Mainly private
Private service	Private	Private	Private	Mainly private

Source: [22]

To this end, seaport sector is adapting to trends in the global economy with port authorities adopting increasingly commercial orientations to meet the objectives and interests of private actors. The role of public sector is being redefined as it is increasingly unable to meet the high costs of infrastructure and high levels of concentration. The new responsibilities and new functions which port organizations are acquiring in this way raise the question of management and operating skills. On the other hand, the other seaport governance models including the different forms of public / private partnerships. In this way, the World Bank [23] launched the first edition of port reform toolkit in 2003 and the second edition was launched before mid of 202. However, it consists of eight modules, such as framework for port reform, the evolution of ports in a competitive world, alternative port management structures and ownership models, legal tools for port reform, financial implications of port reform, and port regulation: Overseeing the economic public interest in ports, labor reform and related social issues and implementing port reform. In comparison with the 2003 edition, the 2021 edition has been produced with the financial assistance for the first time.

Furthermore, WB breaking down the port organization into four categories; going from a fully public port on port service to private port without public participation. Moreover, the tool and Landlord port models offer solutions intermediaries with a more public action slider for the Tool Port, where private activity is confined to the handling but where the superstructure belongs to public authority.

In the Landlord Port the port authority owns infrastructure and land that are leased to private operators within the framework of port concessions [23].

The superstructure belongs to the private operator who operates the terminal. The operating function

and the function regulations are essential in the distribution between private and public actors, as well as between market and non-market services.

2.4. Advantages and drew back of seaport privatization

Port privatization programs are often launched on the basis of potential efficiency gains after ownership is transferred into private hands. Without a doubt, port devolution or hand over from full public ownership ports to full or partial ownership through partnership with the private sector will increase efficiency and overall quality of port services. Although this, SOEs are explicitly tasked with meeting wider social objectives, which may result in, and at the same time provide an excuse for, poor productive performance [24]. Moreover, complexities of evaluating the performance impacts on privatization and their determinant. Added to this, impact of privatization on regulation and competition are often plagued by the non-availability of all inputs/outputs of interest or high quality data. The lack of sufficient time series observations or missing data for a key variable of interest may affect the robustness and reliability of the conclusions, also the unsettled theoretical debate regarding costs and benefits of partial privatization; possible implementation problems in privatization task. Last but not the least, influence of social and political forces in privatization pre and post privatization is another important factor affect seaport devolution.

2.5. Gap Analysis

It is clear that the existing studies of seaports privatization have mainly focused on performance differences between seaport ownership structures as an econometric and operational problems. Thus, as mentioned earlier, this study is considered as the first effort to assess seaport devolution progress in Maghreb region in order to fill gap in this field. Added to this, results from the reviewed literature show number of evidences in favor of the important roles that played by governmental organizations and seaport authorities.

3.0 Methodology

The Maghreb countries of Libya, Tunisia, Algeria and Morocco comprises of 46 commercial seaports as it shown in Table-4. Most of them are located in the south coast of Mediterranean while the rest are located in the coast of Atlantic

Ocean. In this regard, this paper will investigate the institutional dynamics within ports of Tanger Med and Djen Djen as (case studies) which initiating and implementing environmental and sustainability solutions towards the implementation of SDGs.

Table.4. Commercial seaports in Maghreb region

Country	Libya 16 ports	Tunisia 7 ports	Algeria 11 ports	Morocco 12 ports
Ports	Abukammash, Mellitah, Zwara, Azzawia, Tripoli, Khoms, Misurata, Sirt, Ras lanuf, Assidra, M. alBurygah, Zuetinah, Benghazi, Damah, Tobruk, M. Alharega	Bizerte, Goulette, Rades, Sousse, Sfax, Gabes Zarzis	Arzew, Skikda Bejaia, Alger, Oran, Annaba, Djen jen Mostaganem Ghazaouet, Dellys, Ténès	Nador, Al Hoceima, Mohammedia, Kenitra, Casablanca, Jorf Lasfar, Safi Agadir, Tan Tan, Laâyoune, Dakhla, Tanger Med

(Source: Authors derived from various sources)

Most of governance's structure of Maghreb ports are under control of the public sector (State or municipalities) as it shown in Table-5.

Table.5. typology of port governance in Maghreb region

Port organization (management mode)	Public
Infrastructure	Public
Superstructure	Public
Port Operations	Most handling services are operated by private companies.

(Source: Authors)

3.1. Case of Tanger Med port

The partnership with Group A.P. Møller - Maersk was needed in order to support the efforts to improve national economy and to help Morocco to attend in the international markets by implementing its leadership in areas of maritime transport, port management and logistics. By introducing Tanger Med port complex which revolves around the port, industrial and logistics free zones, and infrastructure connections, the Moroccan state wanted to give a new dimension

to develop its North region. In doing so, it creates the Special Agency Tanger Mediterranean which is responsible for the realization of new economic area at the crossroads of major international maritime routes.

Moreover, the desire of the Moroccan authorities is to ensure the success of this strategy development through leading partnerships, has resulted in 2005 to the Consortium form between the A.P. Møller Group. The concession was related to design, construction and operation of the first container terminal from new Tanger Med Port. It has been located in a high seas port, strategically located on the Strait of Gibraltar, APM Terminals Tanger that can easily accommodate the largest ships as shown in Table.6.

Table.6 Summary of evolution and main construction activities of Tanger Med.

2003	Start of Port works
2007	Inauguration port Tanger Med 1
2009	Start of the Great Platform Industrial Tanger Med
2010	Inauguration from the Passenger Port and Ro-Ro
2012	Open the Renault Tanger Med Tanger Automotive City
2014	Open the Tanger Med Port Center, the Port Tanger Med 1 reaches its capacity maximum of 3 million TEU containers
2016	Signature of the Concession of the Port Tanger Med 2 with APM TERMINALS
2017	10 years of operational activities of Tanger Med
2019	start of operations of the ports Tanger Med 2
2020	Tanger Med is the first port container in Mediterranean with 5.77 TEU treaty

(Source: Authors derived from various sources)

Economical vision

Indeed, APM Terminals Tanger has combined local and global expertise, also it has asserted itself from the start of its activities in July 2007 as a real international platform class, with the means operational responding to the best standards to ensure treatment fast and efficient stopovers from ships. However, the served lines by APM Terminals Tanger include lines to Europe, Asia and West Africa and maritime services to South America and the Middle Eastern region, this is in addition to the feeder vessels covering the ports in the sub-region.

The vision of APM Terminals Tanger to be "the leading West Terminal of the Mediterranean Sea and it is a part of long term partnership with the Moroccan authorities to accompany and to support development of the national economy. APM Terminals Tanger is also involved in contributing to sustainable development of the whole of logistics chain in Morocco, supporting restructuring government enterprise in Morocco.

Social and environment vision

APM Terminals Tanger participates in development of local communities and regional through citizen actions proximity within SDGs agenda. Thus, the packages often carried out in partnership with the organizations and non-governmental organizations (NGOs) also, and it covering various fields, such as education, health, environmental protection and infrastructure support, to name but a few. Also, APM Terminals Tanger is committed to a process aimed at reducing its ecological footprint since its inception in 2007. In addition, as part of local communities' development, APM Terminals Tanger finances school transport of more than 120 schoolchildren living far from their schools. This funding renewed each year since 2009 which benefits several villages in the remote and neighboring regions also.

Overall, as a Mediterranean port which handling the most number of containers annually, the direct benefits of port reform as seen are very clear. As a result, Tanger Med port is the best connected seaport in Africa continent since 2013 followed by Port Said which located in Mediterranean Sea also. Table.7 shows shipping liner connectivity index (LSCI of North African countries between 2011 and 2020.

Table-7 Shipping Liner Connectivity Index (LSCI) for Maghreb countries States 2011-2020

Country	2013	2014	2015	2016	2017	2018	2019	2020
Libya	7.3	6.8	5.9	6.4	8.4	11.7	12.8	13.08
Tunisia	5.6	7.5	5.7	6.3	6.6	6.3	7.05	6.59
Algeria	10.2	9.0	10.9	10.6	10.1	10.5	12.2	12.06
Morocco	55.5	64.3	68.3	61.9	69.4	71.5	62.6	68.27

(Source: UNCTAD, 2020)

3.2 Case of Port of Djen Djen

Djen Djen port is located on the south coast of Mediterranean Sea. It is 360 km east of the capital Algiers. It served a limited number of ships annually, although it commenced operating by DPW as it handles general cargo and containers, including grain, sugar, mineral fertilizers and timber. It also imports iron ore and exports finished steel products for the nearby Bellara steel complex.

Economical vision

The United Arab Emirates have already been presented in Algeria for many years in the hotel sector, and their arrival in the sea port sector is

new, in order to compete in container transshipment market (Jacobs and Hall, 2007) [25]. The port of DjenDjen is focused on investment in the various projects to generate economic growth, jobs and innovation, which reinforced its vocation for the future of the industrial activities. The creation of a synergy between the port and the region's industrial sector, will optimize its profitability and competitiveness. The UAE stevedore was signed to invest in the Algerian ports in particular, the future container terminal DjenDjen since 2009.

Broadly speaking, the Emirati group DPW was invested 100 million euros over the five years to modernize container terminals of Algiers and DjenDjen. These investments should, in fact, help to significantly increase handling rates in this port, which suffers from congestion on land, and to reduce the waiting time for ships in the harbor.

Social and environment vision

DPW concessionaire employs 500 people, while retirements are not always replaced, the urgent need for training in modern port management has been met by the Emirati group, which is proposing to send its staff to the port of Dubai for internships.

Table.8 Number of the handled containers in terms of TEUs in Djen Djen and Tanger Med 2012-2018

Year	DjenDjen	Tanger Med
2012	47480	1007226
2013	47480	1007226
2014	23461	1115408
2015	82658	3000000
2016	13135	2963654
2017	53059	3312409
2018	54163	3472451

Source: Authors derived from annual ports report

3.3 framework of sustainable port governance

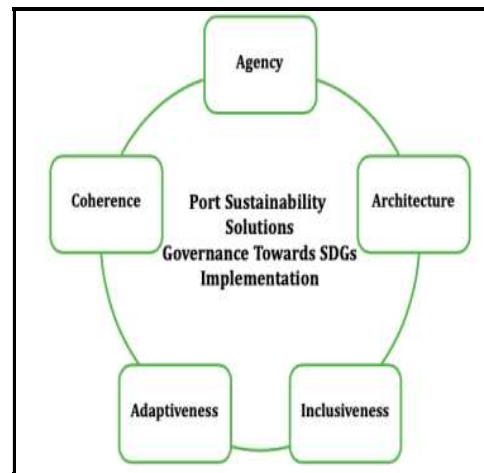
The external environment and nature of port authority have an impact on the port governance models, such as; authorities' operative in the transversal sectors and achievement of the managerial framework to contribute to environmental sustainability in the case of the governance of maritime transport [26].

The concept of green port is that port likely follow sustainable governance, because it is characterized by respect of the environmental uses, for example; the clean technologies and strategic processes. In this regard, [27] defined the green port as "port that request a compliance and an

environmental strategies based on the cost and the legal rules".

In contrast, the sustainability governance depends on the connotes the sum of formal and informal rule systems and actor-networks set up at all levels of society to steer towards preventing, mitigating, and adapting environmental change. This process and interaction involve several aspects as contained in extant global environmental and sustainability governance literature. Five of these aspects; agency, architecture, adaptiveness, inclusiveness, and coherence are put together interconnected in a conceptual framework. The five sustainability governance aspects are explained in Figure-2.

Figure.2: Governing port sustainability solutions



Source [26]

4.0 Results and discussion

Although, operation of the main provided services by the private sector in seaports industry is including; direct services to berthed vessels, seaports of Maghreb region especially container terminals tend to shift more and more towards landlord port model, where infrastructure and services in this model are part of the public assets. In fact, no purely private port nor typical port models in the entire region. Public-private partnerships (PPP), however, is a standard and is a global model particularly in the development of container terminals.

In comparison of two cases, and with the introduction of operations to the private partners, port of Tanger Med, in particular, had shown from the first year an improvement in productivity, and increased port traffic (especially transshipment), the provided services efficiency and an increase in investments. However, due to the limited traffic, Tanger Med port had difficulties in attracting

private investment and for which the question arises of the balance between totally private or public management, because of the risks associated with the transfer of the public monopoly to the private monopoly. Thus, the "landlord port" option with autonomous management of operations by an independent department (private and / or public) from the port authority is the most appropriate solution for most of the ports in the region.

Meanwhile, Maghreb countries are struggling to attract foreign investment which is very limited. Without port reform, Algeria, Libya and Tunisia as Maghreb ports would run the risk of an irremediable stalling of the Mediterranean and world transport system, by virtue of its heavy dependence on maritime transport for its trade and its economy.

Therefore, a real development process is only possible within framework of seaport projects worn only by the public authorities. They can go beyond simple modernization of terminals and therefore go beyond the singular and particular logics of private operators to bring real collective added value.

5.0 Conclusion

PPP can be described as a company formed between a public body and one or more private companies in which the private party offers a public service or project for which it assumes financial, technical and operational risks. PPP which include a contractual relationship and a sharing risks between public and private partners have proven to be an excellent means of ensuring the establishment of infrastructure and public services. The different models of existing public-private partnerships illustrate a multitude of contractual relationships possible.

For most of public seaports, they requires additional resources and it takes more time. It therefore is an essential to forge partnerships with experienced private actors in seaport sector in

order to improve port efficiency and sustainability of port infrastructure. As a result, governments are increasingly looking for the private partners who will participate in the financing, operation and infrastructure maintenance.

This study showed that most Maghreb seaports are publicly owned, although few of them are engaged in marketing reforms and promotion by the private sector participation in port operation. In fact, the political power, recognizes the positive effects of disengagement of public administration, and PPP in the seaports industry on the competitiveness of exports thanks to the reduction of costs, and will increase operation efficiency.

Among 46 seaports in Maghreb region, this paper review and analyzed two different cases which are Tanger Med and DjenDjen container ports from governor structure and sustainability point of views. As shown above, case of Tanger Med port from port reform/privatization is more succeed than others in the south bank of Mediterranean Sea, while case of DjenDjen is unsurpassed, this is due to many reasons. Among these reasons, port location and trade size passing through are the crucial factors to port development. Consequently, Tanger Med port should keep progress and development through attracting more investment, while Algerian ports need to struggle more and more and should benefit from partnership with DPW, which already invested in Algeria for few decades.

The prospects for Maghreb region (especially Algeria's) accession to the European Union's free trade area is require the upgrading of seaport infrastructure through partnership with the foreign players which appears to be a priority more than ever in this context. Libyan and Tunisia should reform their seaports in order to compete with other ports in Maghreb region or in the Mediterranean Basin through PPP model, as it can be achieved through using the World Bank reform tool kit, or by benefiting from the experiences of other seaports.

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