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THE ROLE OF SEAPORTS FOR PORTUGUESE ECONOMIC RECOVERY THE PORT OF SINES

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Abstract

The expansion for new export markets is seen as inevitable and as a challenge to the Portuguese economic recovery. Due to its peculiar geographical location Portugal is conditioned by the need to cross Spanish territory to reach central Europe. Moreover and assuming country's geographical asymmetries where the coastline continues to be the main interface zone comprising nearly 70% of the population located within a 50 km littoral stripe, the adoption of an integrated policy for ports and other related activities appears as imperative. Portuguese continental ports are more than ever assuming a paramount role to surmount land-side constraints. Easy access to the foreland diminishes adverse land connections and mitigates the weak results arising from the hard task to capture cargo in the competitive hinterland. In order to understand the economic role this sector plays in the opening of new export markets, and pointing out expected growth opportunities and the threats that can arise from close proximity with major competitors, this paper cast a glance over the major continental Portuguese seaport. By giving an appropriate evaluation of the actual status and recommending further policies to adopt this paper aims to contribute for the interdisciplinary studies field applied to ports, using the framework of economic geography and spatial analysis rather than a port-specific approach.

Keywords: Port of Sines; Economic recovery; Economic geography; Spatial analysis; Transport networks; International trade

Introduction

Roughly since the beginning of the new millennium and until recently Portugal has been losing exports market share and global competitiveness even in labour-intensive markets. In addition, restricted geographical coverage of exports to Euro area and few traditional third party countries, as is the case of some African countries, worsened the situation. Additionally, some other major reasons for the breakdown in the export sector in the last decade and a half, were identified: i) the euro as currency caused an appreciation of the exchange rate and the correspondent loss of competitiveness; ii) the euro effect raised the unitary costs of work; iii) weak added value incorporation to products and services and, iv) emphasis given to non-tradable sectors. Despite Portuguese catching-up process relative to European core economies performed along the last decade of the last century, with EU accession of Eastern Europe countries where labour costs are (were, at least) lower than the national average, trade imbalances were registered in the recent past. Thus, the long lasting commercial deficit was already unsustainable when Portugal became a global financial and economic worst-hit country. The 2011 Economic Adjustment Programme negotiated with the European Central Bank, the European Commission and the International Monetary Fund in the wake of the international appeal for help due to a sovereign debt crisis, caused profound economic repercussions with GDP falling more than 6% over the period 2010-2013. In order to counteract the general economic (and social) collapse rising net exports were seen as the prime engine for the economic recovery. In 2013, for the first time since World War II, the balance of goods and services recorded a surplus representing 1.1% of GDP and the share of exports in GDP grew to 40.8%. In 2013 exports sent by sea reached 21.3 million tonnes rising up to 58% of total, marking a growth of 19.1% on a year-over-year basis which compares with 13.2% for road traffic.

Geographically considering, Portugal has a peculiar location conditioned by the need to cross Spanish territory to reach central European markets. For Portuguese ports facing landside constraints, to attract cargo from the competitive hinterland effective and reliable transport networks are needed. Yet, after decades of public under investment in rail freight connections along with the opposite policy for road mode the produced results are obviously asymmetric. If the first presents a weak reliability, with resultant lack of confidence in speed and delivery schedules, the latter surmounts the other modes in share and in value of goods transported. In fact, rail freight operates on the Iberian gauge the only that still exists all over the country in spite of the gradual adoption of European

gauge made by Spanish authorities. This situation will lead inevitably to some sort of geographical apartheid since very soon the old Iberian gauge lines will be decommissioned at Spanish side of the border and will not be possible to connect the neighbour country without facing several restraints. As such, promoting sea transport seems to be a plausible and logical choice to enhance foreland capabilities in order to surmount hinterland constrictions, by one side, and for the adoption of a procedure which comes aligned with the preoccupation to mitigate airborne emissions, by the other. In this sense this article describes the major continental Portuguese seaport - the port of Sines - as a key asset in terms of nationwide economy by adopting a holistic procedure namely confronting to important sets of port research in the fields of inter-port competition and regional integration; the importance of local and regional economic activities and their impact over the nature and performance of the supply chain, recommending actions to overcome identified gaps. The content of this paper is as it follows: Section 1 presents a port of Sines general overview analysing the sea-land macrostructure interface in the context of the supply chain continuity. To increase port competitiveness it is urgent the adoption of the European gauge and a direct rail link to the region of Madrid, something that constitutes the "backbone" of interconnectivity to Spain in a initial stage, and to Central European markets, in a later one. An expanded upgraded railway seems likely to be the sole way to gain market share from a peninsular competition perspective. In Section 2, the potential of Sines must act as a requirement to facilitate the creation of new value chains. Framed in a prospective horizon for maritime trade in the 2030 horizon and on a basis of demand scenarios for transport and energy produced by iTREN-2030 and the OECD macroeconomic forecasts for the same period a Moderate Recovery Scenario was defined. At last, in Section 3, we proceed to present the final conclusions that synthesize the results obtained in all analyses performed along the sections which will be exhibited in the form of a final report including some recommendations.

The port of Sines: general overview

The port of Sines is an oceanic port located 58 nautical miles south of Lisbon (37° 57' N, 8° 53' O). In contrast with the other main continental Portuguese seaports - Aveiro, Leixões, Lisbon and Setúbal, Sines is a deep sea port whose terminals can accommodate seagoing vessels with depths ranging from -17.5mHZ at Terminal XXI (containers) up to -28mHZ (the Liquid Bulk Terminal). Its strategic maritime location regarding to its foreland markets coupled with natural physical features have joined together to create the conditions to become a major energy hub in the Iberian-Atlantic façade. Until recently the port of Sines was strictly seen as an energy port considered as a strategic asset though far from truly contributing for an increasing level of accessibility towards spatially dispersed markets¹. The port of Sines was launched as being part of a major economic investment in the early seventies of the past century. In 1971 was decided to build a large new refinery and a petrochemical terminal in the south of the country, in a deepwater site with special conditions to accommodate large oil tankers as part of feasible refined petroleum re-exportations. This project would make country's refining capacity increase and would lead to the foundation of a diversified petrochemical industry. It was a project that was intended to be built and equipped with appropriate facilities and equipment in order to seduce other industrial activities to come. The underlying vision was based in the principles of the best land use and supported in the harmonious and balanced progress of all regions. Back in those days Sines represents an attempt to create a pole of development which would lead to mitigate the strong attraction exerted by cities as Lisbon and Oporto counteracting the generator effects leading to diseconomies that these regions, already congested, began to show. Following Perroux's theory, the creation of concentrated industrial development areas as a means of fostering industrial expansion was part of the political vision that came into force in the years 60/70 of the XX century. It was intended to promote new industrial dynamics grounded in a competitive regional development while simultaneously introducing a form of territorial decentralisation of greater specialised productive activities within the region potential according to its own characteristics. Given this set of vocations, local resources and location advantages, the regional development strategy allowed the central State to: i) play a central role in the development of regional policy by fostering an industrial complex and ii) define and contribute to the process

¹ Accessibility is defined as the measure of the capacity of a location to be reached by, or to reach different locations (Rodrigue, Comtois and Slack, 2009).

of accumulation, particularly that concerning to relate macroeconomic objects with regional development perspective. The launch of such large scale projects took place in an auspicious international economic environment coupled with high tonnage demand for tankers new orders together with the Suez Canal closing episode. This was the inspiring force behind a country that saw - maybe with exaggerated optimism - how to take advantage of its geographical position along the oil route between the Persian Gulf and northern Europe via the Cape of Good Hope. Moreover, 1970 was a decade in which the resurgence of Portugal's maritime tradition was materialized in the form of large sea-oriented projects which gave support to some important industries in the metal-mechanics sector, whether to supply those projects or for export. However, Sines effectively represents a situation of local industrialization as insofar did not had impact regional development of the southern. The effects of its presence were felt only in the coastal strip, providing economic indicators surprisingly a-consentaneous with the reality of the interior: it is a region with either GDP per capita or GDP per person employed above Lisbon's region average. What these indicators translate is welfare and economic development at a micro level and should be replicated into a regional dimension.

The turbulence that characterized the early years of this industrial complex was owed to several factors: endogenous; environmental pressure on marine resources, controversial expropriations conduct for the infrastructures construction, contraction of domestic market, and ii) exogenous; the 1973 oil crisis thought at the beginning as a simple recession becomes a qualitatively new situation, characterized by low growth, interspersed with periods of stagnation and high inflation. The adverse international situation negatively impacted the profitability of the refinery as well as so the reopening of the Suez Canal, with the inevitable suspension of orders for new tankers and the immobilization of a considerable part of the existing fleet. The dynamics of economic growth began to fall down in the first half of the seventies of the twentieth century. Portugal had not promptly proceeded to a profound liberalization of the economy and the adopted model was considered to be interventionist and protectionist. This was reflected in increasing tensions and difficulties in such sectors most vulnerable to crisis in a context where the financial capacity of authorities to manage these difficulties was decreasing, together with the social instability of the period. In the advent of the 1974 revolution the central state took control over the accumulation mechanisms which led to the nationalization of major economic assets. Although the Sines project abandonment has been proposed more than

once, it turned out to be considered of "absolute irreversibility" (Decree No. 487/80 of 17 October).

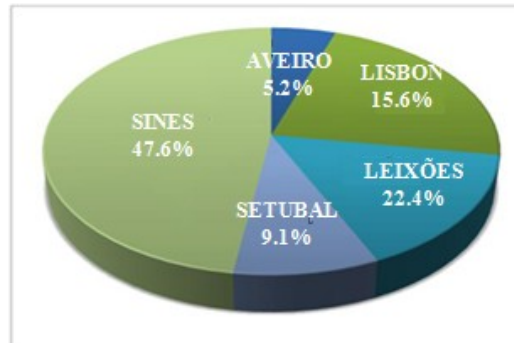
Fig. 1. Sines' container throughput in TEU, 2004-2013. (Source: Own elaboration (from Port of Sines Authority statistics).



Container operations at Sines Terminal XXI took place in the year 2004 and since then the terminal is experiencing a substantial growth in container throughput. Sines is now on the move to become a truly container port, a condition to be reinforced in the near future. Container segment allowed the rebirth of port activity creating new business opportunities through cargo diversification. Even though highly subordinated to liquid bulk trade namely crude oil for the local refinery, cargo weight dependency on petrochemicals is diminishing and the creation of new business opportunities made possible by cargo diversification is sharply increasing.

In the short term such dynamic effects may attract foreign investment and different export markets and the participation of new actors can act as main drivers to the creation of logistics platforms and dry ports along the distribution chain. Today, Sines is the nation's major port in total throughput and main exporter in absolute terms. Figure 2 depicts the main continental Portuguese ports market share; Sines is the one that has been presenting annual systematic growth in total throughput with an astonishing national market share of 47.6% which are attributable mainly to the containerised cargo segment.

Fig. 2. Portuguese ports market share, 2013.
(Source: Moreira and Lopes, 2015).



The growth rate between 2012 and 2013 is a unique case amongst all European seaports. The year 2013 (and previous) shows that recent economic recession and unfavourable market situation produced no adverse effects in terms of both goods and commodities in Sines, on the contrary. This somewhat surprising result is mainly due to the large increase observed in the containerised segment. As stated by Moreira and Lopes (2015: 9), “*the increase in the container component is both the result of transshipment activity and the export component, particularly what concerns with new extra-EU markets*”. Yet, this activity even being significant interacts little with the hinterland (Rodrigue, 2012) and does not add value to the goods. The transshipment activity serves the purpose of the continuity of the supply chain enabling the delivery of goods to wholesalers or final customers. It is essentially attractive in financial terms for terminal operators and to Port Authorities, reason why all container ports are interested to get involved in this activity. However, are flows that are in need of multiplier effect in regional terms.

Competitive container ports in close proximity

The thirty-year concession of the Terminal XXI to the Singaporean PSA Group, a major global player, transformed Sines isolation at the Atlantic façade into competitive advantages. An ongoing construction project on both the land and water sides mostly supported by PSA gives the opportunity to this terminal operator to increase influence at Europe’s container market². Sines is rapidly becoming an Atlantic hub and spoke mainly due to the Mediterranean Shipping Company’s scheduled service lines which, to some extent, came to rekindle the theme of the best option for the flows of goods inside the European continent. At present, Sines

² PSA International is investing 40 million euros in the container terminal XXI to boost the annual capacity up to 2.5 million TEUs.

container throughput already casts a shadow of preoccupation into neighbouring transshipment hubs.

Hubs that compete directly with Sines are mainly located along the southern coast of Spain, namely the port of Algeciras and, further away in the Mediterranean, the port of Valencia, albeit there has been some new activity in the port of El Ferrol, (up north in the Galician coast at the confluence of the Atlantic and the Cantabrian Sea) which seems to be an attempt to anticipate the (expected) effects with the expansion of the Panama Canal. Sines' attributed centrality came from its geographic position at the crossroads of several east-west shipping routes (or equatorial), north-south and diagonal. The proximity to the Strait of Gibraltar, a strategic waypoint of the global beltway, would certainly be an advantage to Sines' location if the investment in containerised cargo has been carried out decade and a half before. Not having so, this lack of opportunity allowed another major intermediate hub to set forth; Tanger Med, the North African hub located in Morocco. Tanger Med offers very low deviations and arises as a direct traffic competitor offering very attractive tariffs and port taxes. Due to low labour costs, among others such as tax breaks and financial incentives to firms to locate, Tanger Med can be seen as a platform granting access to the European continent for cheap goods produced in North Africa. Very concretely, this port can arise as a direct competitor due to the presence of MSC and PSA, in which port they operate. As said before, the first is the main service liner calling at Sines and the latter is Terminal XXI operator. As to the ports of the Western Mediterranean concerns and in terms of total volume in 2013, Sines total throughput reached 36.5M tonnes, while Algeciras and Valencia moved 91.1M and 65.0M respectively³.

A proposed conceptual model was elaborated to investigate the conditioning factors for inter-port competitiveness. With this purpose information have been collected from a port range composed by four ports: Algeciras, Barcelona, Sines and Valencia. We proceeded by developing with these elements a matrix (Table 1), which can be constituted as a starting point for more detailed analysis in terms of strengths and weaknesses among these major competitive players. Data refers to the year 2012.

³ Port of Sines total throughput in 2014 reached some 36,7 thousand tones and experienced a new record with 1.227.694 TEU.

Table 1. Inter-port competitiveness factors. (Source: Moreira, 2013).

	Geography		Efficiency		Rail connections		Natural hinterland		Depth		Service lines		Congestion degree		
Factor	Distance to Panama (km straight line)	Rating	Terminal productivity (2012)	Rating	Distance to Madrid by rail (km)	Rating	Consumers (number)	Rating	Metres ZH (Container terminal)	Rating	Regular lines (2012)	Rating	Land availability; Weak (3), Medium (4) & Good (5)	Rating	
Weight (%)	20		17		15		15		13		10		10		Total
Algeciras	8.143	4	42%	4	756	2	c. 8 million (Andalucía)	5	16	3	82	2	Weak	5	3,92
Barcelona	8.804	1	-29%	3	665	3	c. 7,5 million (Cataluña)	4	16	3	280	5	Medium	4	3,45
Sines	7.850	5	-39%	2	1.063	1	c. 3 million- Distritos of Setúbal, Beja, Évora & Faro and Lisbon (partially)	1	17,5	4	15*	1	Good	1	2,86
Valencia	8.593	2	113%	5	464	5	c. 4,7 million (Comunidad Valenciana)	3	14	2	100	3	Weak	2	3,51

The final score Sines collects is bleak. From factors that should be enhanced lies the need of new or updated rail links, an expanded consumers area for economies of scale to arise and the financial performance criteria to as continuous improvement. Certainly by choosing other factors could influence the final result (the business or residential environment parameters could assign a higher score to Sines, for example), and also different weights could exert changes in final classifications. Similarly, knowing that shipping lines give greater importance to reliability and quality of service than to port location, maybe we have been too generous in assigning to this factor such a weight. Above all, this analysis is intended to carry out a narrowing of the criteria that influence the choice for cargo concentration ports; others could also rightly be used. At the end, the identification and selection of a particular port depends on ship-owners decision which determine whether a given port operations are feasible and profitable. Even though, the presence of infrastructure does not necessarily guarantee traffic since service lines can select ports were they provide services as changes in business opportunities arise.

Net revenue per tonne in Sines has the worst record among the major Iberian ports, proving that bulk loads presents smaller results per tonne than unitised cargo, although those financial indicators do not demonstrate the performance of the port but of the Port Authority. The indicators on which underpin the competitiveness criteria are subjective in nature, because the international comparison is difficult to accomplish, due to lack of standardization and different collection methods. This analysis was used essentially as a *proxy* for port competitiveness. The main function of the indicators should not be to serve exclusively as institutional information or as a method of comparison between ports, but rather to assume that the potential benefits of the port reflects for both users and consumers.

Railway corridors, distribution networks and competition

The demand for transport is a derived demand which responds to the needs of the organization and functioning of the economy and society, thus the induced effects a well designed railway network produces must be taken into account. Well designed and functional transport systems play a fundamental role in facilitating business location, access to markets and, concomitantly, to job creation and wealth and corresponding population settlement. Longer distance produces higher transport costs and restricts mobility. This is one of the main reasons for firm's choice to locate along the shore line and not in the interior. Together with a loss of population that has been taking place originated by poor wealth attractiveness the country's deep interior is gradually turning into a mere landscape. To mitigate Portuguese regional asymmetries and the uneven distribution of population in the mainland as well as the location of firms and to thwart market concentration, improve transport infrastructure may result as a diminishing factor for regional disparities and act as a counter-agglomeration factor for littoral regions attraction. In the case of southern Portugal territory in general and in the case of Sines in particular and notwithstanding its geostrategic and economic importance rail freight accessibility to the port and Industrial complex (ZIL - Industrial and Logistics Zone) still lacks conditions to be considered as optimal freight corridors. As for road mode it concerns, connection to the major A2 remains to be concluded even though loads carried by road being small. Lacking attractive conditions in logistics specialisation together with the absence of reliable connections to the hinterland translates into weak competitiveness disadvantages and creates repulsive effects on potential investors. If the natural hinterland of Sines lacks consumers' absorption capability and presents low productive capacity, to fill this gap is vitally

important to reach those consumers and industries in the competitive hinterland assigning to rail freight the utmost importance. The problem is to ascertain whether this investment should be made by public, private or by both entities (in the form of a somewhat discredited Public-Private-Partnership). If at the day of today the small number of daily fully loaded cargo trains does not justify private operator's investment, since increasing returns in production and transport costs are not present, we face a chicken and egg problem. Without optimised rail freight lines, economies of scale are impossible to achieve thus reducing the locational appeal for firms and workers (Ducruet, Notteboom, De Langen, 2009). Conversely, without market demand, rail freight investment in new or upgraded lines does not configure as a priority, which yields government's uncertainty revealed in the form of dubious approaches about this subject. Therefore, and for the port of Sines from the interregional spatial conceptualisation point of view a rail freight corridor connecting Spanish border provides the physical capability and the requirements of modern supply and logistics chains, responding to the aim of promoting inland development as a way to reduce regional disparities. In this conceptual model Sines regulates freight traffic inbound and outbound serving as an interface between regional, national and trans-Pyrenees systems.

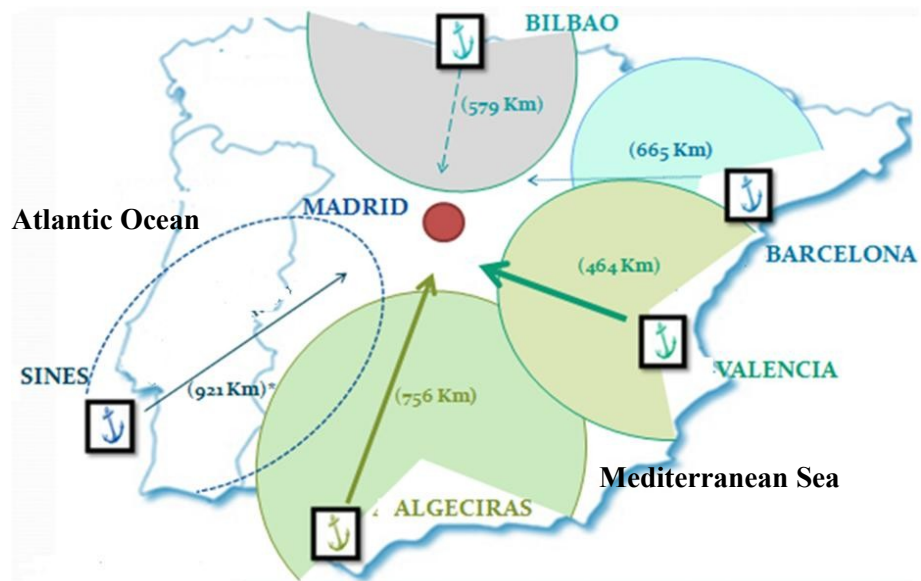
At present, most of rail freight with origin in the port of Sines heads towards north across the Southern Line (Linha do Sul), to the multimodal logistics platform of Bobadela, near Lisbon, and/or to Entroncamento and then is redirected further north via Linha do Norte (Northern Line). Connection to Linha do Leste (Eastern Line) enabling rail connection with Spain takes place some 23 km after Entroncamento rail crossroad, yet, this is not an electrified rail line and train compositions runs at an "impressive" 40 km/h along the rail track. At the origin of the current network layout lies the fact that this pathway obeys to the need for coal unloading to feed the thermo electric plants of Sines and Pego near Abrantes, some 200 km up north from Sines. This tortuous path (red line in Figure 3), exemplifies the concept of friction in a visible way. The existence of a "*missing link*" (black dots) requires the direct connection between Sines and the gateway to the competitive hinterland: Badajoz Logistics Platform, located at the Spanish border.

Fig. 3. Sines rail freight network: the “missing link”. (Source: REFER, adapted).



For the sake of its future growth and to fulfil the mission as pivotal for regional development Sines faces a major challenge: the need to obtain market share in the competitive hinterland by means of unrestricted access to Spanish Extremadura and Madrid’s Autonomous Community markets and to potential seven million consumers. A new European gauge railway is obviously imperative to achieve that goal although one should note that competitive Iberian hinterlands overlaps each other and Sines is conditioned by Spanish ports by virtue of its larger geographical coverage giving them customers preferences within Spanish natural markets (Figure 4).

Fig. 4. Sines' competitive hinterland. (Source: Moreira, 2013).



The distance by rail from Sines to Madrid (current layout) is about 921 km which is more than twice the distance from Valencia to Madrid. However Sines has a good chance to attract traffic to and from Madrid, in particular from vessels not calling at Mediterranean ports or for shippers targeting to trade directly with South American and African markets. With regard to endogenous resources, advantage should be taken from factors that distinguish Sines from its major competitors, namely land availability, labour peace and targeted production for new export markets.

The port of Sines: a vision for the horizon 2030

In a region where production process is very much based on elementary industrial phases of production, challenges to firms and sectors impose the necessity to evolve into knowledge intensive activities and creativity. This underscores the need of fostering dynamic business clusters supported in innovation and diversification as a means to incorporate comparative advantages into exported goods and boost economic development. The presence of foreign capital is a factor of competitiveness given its natural selectivity. Given the actual scenario, in which the worst of the economic crisis that took place since 2008 seems to have past behind, for southern Portugal region marked by stagnation in the primary sector and low levels of industrialisation, capacity to attract foreign capital is of the uppermost importance. This issue takes on greater significance and relevance if we

consider the low level of capitalization shown by a relevant part of national firms.

At corporate governance level (political factors), appealing for the location of firms and the discovery of new export markets it is not enough. It is also necessary identify which (kind of firms) have that potential, how (to achieve the previous) because the export markets tend to select the most efficient companies, and where (should them be located). Hence the importance of investing in high added value and capital-intensive sectors, to the foreign market, and other labour-intensive / lower value for the internal market, particularly as import substitutes.

Clusters are defined as a population of interdependent organizations operating in the same value chain and geographically concentrated (Rodrigue, Comtois and Slack, 2006). However, in the specific case of Sines region this can be described as a multidimensional cluster displaying some territorial discontinuity. By virtue of its relative remoteness to large cities (which happens to be a benefit to priceless environmental assets), the clustering model shows some singularities. From a starting point constituted by the Industrial and Logistics Zone (ZIL) a trend of diversity among medium/high-tech industries emerges, creating attractive conditions for Sines to become a centre of technological excellence and a national reference for subsidiary activities. The extension of this trend to contiguous areas will be the next step to execute whereas the interaction between different actors can evolve through complementary knowledge processes, because the countryside cannot turn into a mere landscape and industrial activities are wanted to help. Within this prism it is advised to proceed to an exhaustive survey of all the capabilities of attraction for firms that can benefit from infrastructure both existing and to be developed.

From the Integrated Scenario prepared by iTREN-2030 for transport and energy demand, based on economic growth forecasts for the various regions of the world and the repercussion that such occurrences will have on freight, the following three prospective scenarios were elaborated: i) Strong Growth Scenario ii) Moderate Growth Scenario, and, iii) Stagnation Scenario (Table 2).

Table. 2.
Scenarios for
2030. (Source:
Own elaboration).

	Scenario 1: Strong growth Scenario	Scenario 2: Moderate growth Scenario	Scenario 3: Stagnation Scenario
	<i>Post-crisis strong recovery both in economy and trade</i>	<i>Post-crisis moderate recovery</i>	<i>Stagnation (or contraction) of global trade flows</i>
World trade	<ul style="list-style-type: none"> > Strong global development (global) > Exponential increase of traffic in the Panama Canal 	<ul style="list-style-type: none"> > Moderate growth driven by emerging countries (regional) > Traffic via Panama grows enough to compete with Suez 	<ul style="list-style-type: none"> > Weak growth of global trade (local to local) > Traffic via Panama doesn't impact Sines
Logistics	<ul style="list-style-type: none"> > Sines' networks for both short sea shipping and rail freight (Iberia & Europe) 	<ul style="list-style-type: none"> > Emphasizes the importance of DC in Sines to Iberian distribution 	<ul style="list-style-type: none"> > Trend towards limited local DC
Transport	<ul style="list-style-type: none"> > International rail gauge adopted increasing competitiveness of Sines 	<ul style="list-style-type: none"> > New rail link connects Sines to Madrid 	<ul style="list-style-type: none"> > Competitive hinterland remains very short
Networks	<ul style="list-style-type: none"> > Shipping prices remains relatively constant 	<ul style="list-style-type: none"> > Prices of road transport increased considerably 	<ul style="list-style-type: none"> > Prices for all transport modes worsen very rapidly
Infrastructures	<ul style="list-style-type: none"> > New container Terminal to cope with increased throughput > Great development of the ZIL 	<ul style="list-style-type: none"> > Terminal XXI near its full capacity > Sustained development of the ZIL 	<ul style="list-style-type: none"> > Containerised goods grow very slowly > ZIL's loss of competitiveness

With a resumption of maritime trade to pre-crisis levels driven by steady economic growth of some emerging countries, forecasting shipping demand in line with the prices of fuel and on less permissive environmental policies to as to reduce land traffic but conditioned by a weak economic growth of Western economies, a Moderate Growth Scenario which arises as the more likely to occur was defined. A widened Panama Canal will allow direct links from the Pacific to the Atlantic for post-Panamax vessels with the consequent efficiencies of scale which may lead to an increased flow of trade between the Pacific basin, both coasts of North America, the Mercosur and Europe. The scale effects of the Canals' widening are still to see and the success depends on several conditions, including world growth trends (which contributes to a higher or lower degree of trade protectionism adopted by each country), the price of fossil fuels (bunker prices) and the amount of fees to be applied per TEU transiting the Canal. The first condition has a higher impact over the others (direct effects on trade volume), the second acts on shipping costs (which may bear the option for rail routes such as the Trans-Siberian as

alternative) and the third, more dependent on investors willingness, can perform a trade-off between distance and transport costs in the option for Panama over Suez. The proposed scenario, which appears to be the one who better fits the willingness of both Panama Canal Authority and shipping lines in regard to the effects produced by a wider lane of the Canal, seems after all to be plausible. Nevertheless, assuming the Moderate Scenario means a new standing to the port of Sines as it emerges as a major Atlantic player capturing a substantial part of the traffic originated, or with destination, to new trans-Atlantic markets.

On the other hand, the so-called Transatlantic Trade and Investment Partnership (TTIP) can also act as a game changer in the commercial relationships between Europe and North America creating the critical mass for the growth of maritime operations in Portuguese seaports, especially for Sines due to its capability for ocean-going vessels to call. The TTIP agreement proposes making trade with the U.S. easier in the future. The report “*Small and Medium Sized Enterprises and the Transatlantic Trade and Investment Partnership*” published by the European Commission in 2015 after a survey conducted with a significant number of European small and medium-size firms, assumes that custom barriers are a deterrent for SME’s to export to U.S. This report also suggests that such trade agreement can work as [the] “*best opportunity to reduce small companies’ costs and potentially open up for them new market possibilities, to the benefit of both sides of the Atlantic*”. Saying so, it appears that TTIP opening markets to an increasing trade between the two partners and the concomitant attraction of FDI would be a good deal for European firms and industries that still suffer from high and complicated tariffs (e.g., food and textiles)⁴. Since this potential trade partnership is still under discussion and depending on the goodness of negotiations, at a first glance anyway, the true final results remain to be shown.

Final report and recommendations

Based on a Moderate Growth Scenario it is possible to predict, to some extent at least, an increasing trade via the Panama Canal with origin in the west coasts of America towards Europe as well as new round-the-world service lines. At a very first sight, Sines can profit from this new trend by means of economies of scale resulting from fewer required ports of call

⁴ Complicated customs rules mean companies have trouble predicting how much it will cost them to ship their products to the US.

and traffic concentration at specific hubs. As a port displaying comparative conditions to be chosen for new regular lines Sines presents conditions to be a new node for transshipment in the global maritime network. If the right conditions were implemented and somewhat preferable, the results can arise in the form of to become a coastal gateway, depending, of course, on the will of the players involved. The previous, and due to the smallness of its hinterland, promotes Sines as a simple transshipment node for containerised goods not overtaking simple local dynamics. The latter seems to be the best option once it can foster ship capacities and ship types, the value of freight and cargo diversity at port and to improve rail freight corridors not forgetting the possibilities alternative sources of energy as maritime bunker can offer⁵. Abbreviating, Sines can at some point in the near future become to be seen as a regional industrial cluster. Creating the conditions for increasing exports and attracting cargo flows to and from the competitive hinterland - ways to create absorption – Sines can aspire to witness the emergence of an Iberian gateway in a later stage. As an option for reducing transport costs associated with fuel prices, service lines calling Sines will have the conditions to improve both short-sea shipping and rail freight⁶. With the redesign of logistics distribution networks, road transport will be surpassed by rail within the competitive hinterland, and by maritime, over the long haul.

For port stakeholders, the value for money of the land-sea interface should not be the only concerning matter but rather and above all the maximum efficiency and effectiveness that all integrated area offers translated in capital gains. We are talking about adjacent industrial and logistics areas existing or to be developed following of what is advocated to city-regions. On this basis, the container terminal becomes an intermodal interface with a pivotal role of leveraging regional economies, something that is called, according to Rodrigue and Notteboom (2006), as port regionalisation process. To refer to commercial ports there is a need to conceive a vision that is not limited to its physical infrastructure, the superstructure formed by the handling equipment and land space limited by port physical boundaries. Seaports are part of a global industry, whose multiple challenges range from the geopolitical analysis of markets to strategic management of assets and demand cross analytical skills such as the planning of the logistics networks (which refer to the optimisation of the

⁵ Sines collects all the conditions to become a LNG bunker supplier namely because it hosts the only LNG terminal of the country.

⁶ The recent takeover of the previous called CP Carga (the public rail freight operator) by the MSC Group came to support the above said.

chain flows and the elimination of the friction of distance) and microeconomics capabilities as the analysis of price formation mechanisms, for example. In this sense we have to look at seaports in a wider perspective among world maritime market and as a complex system in which a wide range of independent and rational agents interact each other and whose purpose is to achieve market dominance or, to a lesser extend, increase their market share. Specific strategic policy of a seaport can not be traced in the ignorance of the resulting phenomena that arises from the interaction and behaviour between those agents.

Finally and looking over the different types of cargo handled over the years and assuming the importance that many authors give to the existence of a diverse portfolio of activities, Sines should pursue growth in container segment without losing its vocation as “energy” port. Not only to ensure greater operational flexibility and a lower risk in face of price fluctuations of raw materials but rather to accomplish the role of a multifunctional and diversified seaport. In terms of spatial economics analysis, the boundary where Sines competes for traffic from competitive hinterland is the determinant to enhance the expansion of its distribution network. An upgraded rail freight line must act as a catalyst for the attraction of industrial firms along the corridor that links the port to inland urban areas or to industrial centres allowing rapid runoff of flows. By virtue of our geographical condition we have to adapt our connections to Spain, by adopting the European gauge, signalling and speed control and the ERTMS system fully interoperable is required, allowing Portuguese trains enter Spain without difficulty. The existence of a missing link presupposes the need for a direct link from Sines to the Logistic Platform of Badajoz, gateway to the competitive hinterland and to potential growth due to a limited natural hinterland.

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