

**Northwest Portuguese Seaport System in the Early Modern Age.
Results of a Research Project**

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I. ANALYTICAL FRAME

This paper aims to discuss the existence of a Portuguese seaport system in the Early Modern Age, centred on the analysis overtime of the evolving network of Northwest seaports and their connections with Lisbon, the main Portuguese seaport in the Early Modern Age.

Some of the data and conclusions presented in this paper result from a research plan carried out by a Portuguese research team brought together in the HISPORTOS Project – *A contribution to the history of NW Portuguese Seaports in the Early Modern Age*¹.

We shall work with some basic concepts such as seaport system and seaport hierarchies, seeking to understand the complex relations that developed within a port precinct, based on an approach that favours a micro-analysis of the issue.

It is undeniable that in the last few decades, Early Modern European historiography has largely focused on the analysis of port systems and seaport networks, paying particular attention to the overseas traffic system. This perspective is based on a theoretical conception of the existence of international seaport hierarchies and tends accordingly to be centred on a macro-analysis. This type of approach underrates or even disregards the study of the internal dynamics and specific profiles of each seaport. In contrast, the Hisportos project selected the micro level and the local and regional scales as its methodological starting point to study the seaports in NW Portugal, aiming to discuss the existence or non-existence of seaport models. But models cannot be developed out of context, stripped of specific local realities, without resorting to the perception of possible evolutions in which, besides the general cyclical events and the policies of the central authority, local circumstances and specific conditions and features of each seaport interfere.

The theoretical premise of our research was, then, that a **micro-analysis** provides a crucial opportunity to review the levels of research and the thematic topics involved in seaport studies, facilitating the search for answers to questions that the macro approach is unable to

¹ POCTI/HAR736417/2000

give.² This period, particularly from the sixteenth century, saw the consolidation of transport networks between the coastline and the interior, some making use of the waterways as routes for shipping goods and supplying regional sub-areas. The study of port hinterlands is therefore crucial to our understanding of the economic dynamics of far more extensive regions³ and it is important to study its local and regional interactions to better understand local situations on the one hand, and international and intercontinental connections on the other.

It is also important to see a port in its complexity as a whole. All these issues led us to work with the concept of **seaport system**. The suggestion mentioned in Guimera⁴ and others seemed attractive: it is a concept that should help us to define the essence of ports. As an object, a port is difficult to analyse. It exists as the result of complex relations. Relations between distinct elements of various types: economic, cultural, social, political and geographical. The intensity and level of interrelated causes and effects, of sub-relations and major relations, are never determined in a unilateral way. The very essence of ports may be determined by one commodity or by many commodities, regardless of their value: by long-haul trade ships or by coastal traffic; by fishermen or by passengers; by shipbuilding or by transportation logistics. The nature of the object is comprehensible through the most important elements that make up the system, but also through the features of these elements and the relationship between them. Decisive for the results of the study is the definition of the system. It may be defined at the level of a single seaport or even at a regional dimension. In this sense, all ports in a region, regardless of their importance, can be taken as elements of a system⁵.

Our standpoint was not to assess the overwhelming importance of some ports over others. What interested us here was to re-exam the role of small ports (defined in terms of concentration and distribution of goods, vessels, services, capital) and place them within a system

This perspective does not, however, invalidate the need to define a **seaport hierarchy**. Unequivocal hierarchies, though, do not exist: the parameters on which we base its definition determine the relative position a port may have in relation to all the others. For instance , a large commercial port may not be a large transport and shipbuilding port and vice-versa.

² Amélia Polónia; Inês Amorim, *Hisportos – Contribuição para o estudo dos portos do Noroeste português. Apresentação de um projecto de investigação*. Simpose “Microhistória em Hispanoamérica: Metodologias, Temas e Linhas de Investigação. As migalhas e a pluralidade”. 13th AHILA International Congress (Ponta Delgada, 3 to 8 September 2002).

³ JACKSON, Gordon – “The maritime experience of a region without ports: Argyll, Scotland, c. 1740-1840”. *International Journal of Maritime History*, XVII, 2, Dec. 2005, pp. 261-284.

⁴ Agustín Guimera; Dolores Romero (ed.), *Puertos y sistemas portuarios (siglos XVI-XX)*, Madrid, 1996

⁵ Helena Osswald; Inês Amorim – “The Hisportos case. Scientific options and research programme. A possible approach to NW Portuguese seaport studies” in *European Seaport System in comparative approach. International workshop* (Porto, 21-22 October 2005). Proceedings in the press..

Furthermore, the relative ranking of a port in relation to others evolves over time, in accordance with geo-economic, political or even logistical contexts, which promote or review the relative standing of each seaport.

The second premise from which we depart is that of networks of complementary ports. It can be economic-financial, woven according to the pattern of merchant networks, sustained by capital transfers, by the placement of agents in trade markets, or even logistical. In this sense, we can assume that a large commercial port may depend on several transport ports, since its mercantile fleet was insufficient to sustain the maritime trade routes it serves. The same can be said of nautical complementarities, on which the large fleets depended to recruit their crews, supplied through veritable hotbeds of seamen along the coast, residing in maritime trading posts which cannot under any circumstance be identified with large merchant markets. See for example the cases of Vila do Conde, Peniche, Setubal or Sesimbra, whose prominence changed distinctly overtime, depending on the relations established with major seaports.

These networks of complementary ports are also established around shipbuilding. Small-ports supplied a specialised labour force and thus sustained shipbuilding in a large shipyard ports. This was the case of *Ribeira das Naus* in Lisbon, sustained not only by voluntary but also by compulsory recruitment, which forced shipbuilders from all over the kingdom to move to Lisbon under royal orders, on authentic duty commissions. It is also the case of *Ribeira do Ouro* in Porto, as can be seen in a roll from 1656, from which we gather that seventy-six per cent of the shipbuilders recorded were originally from the vast hinterland of Entre-Douro-e-Minho (the area running north from the River Douro to the border with Galicia), covering several municipalities of Porto's rural and maritime hinterland.

So it is important to examine all types of networks on a smaller scale, and not simply that of the economic or strictly commercial connections between the major international ports. The historical standing of these great maritime centres has often relied on local inter-port networks. In fact, from the viewpoint of logistics, shipbuilding, transport capacity, and the availability of seamen, a cosmopolitan port necessarily relied on other ports and on areas where agriculture and crafts were the predominant occupations, without which their dynamism would have been impossible to sustain. This is verifiable in the case of Lisbon during the period of overseas expansion.

It is also important to understand that a specific port experiences evolutions brought about by shifts in its economic standing. Those changes also introduce different social dynamics, thus undergoing successive internal reorganisations and different rankings within the seaport networks.

Even if we restrict our study to the commercial dynamics of a port synchronically, it is not unambiguous, nor do they occur within only one sphere of influence. A certain port may rank simultaneously::

1. **in circuits at a local scale**, interconnected with its hinterland, which it serves as a hub of links with broader external spaces through import/export circuits;
2. **in circuits at an interregional scale**, through which it establishes connections not only with the internal economic dynamics of the kingdom, but also with the economic spaces of the North and South of Spain, traditional axes of an intense circulation of products and men;
3. **in international circuits**, which emphasise, in the time period analysed, the European dimension;
4. **in transoceanic circuits**, an important part of Portuguese trade routes since the fifteen century.

These two dimensions, the European and the colonial, were often two faces of the same coin, since a port may be a re-export hub for colonial merchandise destined for European markets. The very requirements involved in overseas affairs, particularly those of a mutualist or financial nature (insurance for ships and merchandise, obtaining credit, access to secure exchange markets), lead to this constant interaction between transoceanic and European trade networks. Access to these latter two circuits, especially the colonial one, is thus of fundamental importance, because:

- 1st. they determined the international centrality of each port and their indexes of protagonism in international and intercontinental port systems;
- 2nd. they marked the evolving dynamics of the north-west Portuguese seaports in the period analysed and determined their differential position within the Portuguese economy.'
- 3rd. they clearly determined the internal social structure of the ports at several levels: they shaped the profile of the merchant communities; the integration of foreign communities which are directly linked to commercial dealings; the composition of the elites in power and the internal socio-economic elites.

Departing from this theoretical frame, the premises we assumed as central are based on two key ideas:

1. The Early Modern Age (16th-18th centuries) witnessed significant developments in the ranking of several Northwest seaports in the Portuguese port system hierarchy ;

2. The relative ranking of each port in this hierarchy and differential access to the different trade circuits does not depend exclusively on its options and intentions, but is rather related with highly distinct yet deeply influential factors, among which the following should be noted:
- i) geomorphological restrictions which determine the logistical capacity of certain ports to remain active, or to fail in long-haul traffic circuits;
 - ii) global mercantile and financial dynamics, directly linked to the paths followed by the Portuguese overseas empire in a play of forces with other European maritime powers in permanent ascension: Spain, England, the United Provinces of the Netherlands and France.
 - iii) evolving internal and concerted economic strategies which redefine hierarchical positions of each port;
 - iv) policies and economic directives established by the central authorities, in a kingdom in which State interventionism in the economy is an historically proven fact, and which superimposes private initiative. See for example the monopolistic trade policy followed until the end of the sixteenth century by the Portuguese monarchy, which directly favoured the port of Lisbon, also capital of the kingdom; the implications of opening the Brazilian economy to private entities, responsible for the greater protagonism of the ports of Northwest Portugal in the seventeenth and eighteenth centuries; and the revival of an interventionist and monopolistic orientation followed by the Marquis of Pombal, in the 18th century, which drives small investors and entrepreneurs away from colonial economy, especially the Brazilian, preferring rather the establishment of large trade companies, dominated by major capital investment.

Taking these theoretical premises as the starting point, we will seek to conduct an empirical analysis of the issue at hand. To this end it is necessary to clarify two topics: the criteria for choosing the area of study and the guidelines of the research project HISPORTOS

II. The NW Portuguese Seaports – a global analytical grid⁶

⁶ Amélia Polónia, "HISPORTOS – a research project on Portuguese seaports in the Early Modern" Age in *European Seaport System in the Early Modern Age. A comparative approach. International workshop* (Porto, FLUP, 21-22 October 2005). Proceedings in the press.

Main Portuguese Seaports



Fonte: POLÓNIA, Amélia - *Mestres e Pilotos das carreiras Ultramarinas (1596 - 1648)*, ..., Anexo A, *Carta Administrativa de Portugal (Atlas do Ambiente)*, escala 1:250.000, Direcção Geral do Ambiente, 1994. miguel.nogueira / 2003

NW Portuguese Seaports



The choice of the area, **Northwest Portugal** (see map), was validated based on geographical criteria – the characteristics of the coastline and port accessibility – and on historical criteria. In fact, in NW Portugal the geography of the rivers and that of the morphological aspects of the coastline shaped a potential propensity for ports, boosting communication along the coast and intense activity at the river mouths. However, the dimension and type of NW Portuguese ports vary between very small harbours and small and medium ports.

It is also common knowledge that those ports played a specific and highly relevant role in the trading networks of the early modern period. It has been clearly established that they interacted closely with the North and South of Spain and Northern Europe, as well as with an extended insular, African and South American Atlantic. These essentially commercial dynamics should not cease to produce implications for port infrastructures and for strategies of leadership and political and economic protagonism that need to be studied, case by case...

These aims led to the constitution, in 2000, of a multidisciplinary team that included historians, archaeologists, geographers, cartographers, engineers and architects. The team's purpose was to develop a research methodology and gather data that would enable the area under study to be considered from an inter-disciplinary viewpoint.

Besides the historical dynamics, we concentrated on studying the consolidation of port precincts and port infrastructures, their integration in the urban setting, as well as the technical and financial constraints of these dynamics, assuming an active interaction between these variables. The methodology we proposed to follow consisted of taking each port separately and subjecting it to investigation using the same inquiry grid, so as to compile databases able to systematize the available information.

The project sought to provide information about some essential questions::

- in what way did geomorphological conditions interfere with the potentialities of each seaport?
- in what way did the crown, the local authorities and politics interfere with the construction of specific seaports and sea towns?
- how did the construction and reconstruction of seaport infrastructures take place: the projects, available technology; kinds of investment; national and international technicians mobility?
- how did the different seaports in these historical and geographical spaces work together and in what way were they part of a larger system – regional, national, European and intercontinental.?

To sum up, what we aimed to underline was that the infrastructural construction of ports could not be exempt from areas of questioning that considerably transcend the technological

aspects. They involve issues related to geomorphological variables, historical evolution and economic options in which the micro approach was essential, even when research covers a long period of time and a vast territorial area.

Strict answers to the questions raised by this analytical structure were not found in the historiographical output, which actually contained considerable gaps with respect to the history of ports in the periods prior to the eighteenth and nineteenth centuries. We were confronted with three main kinds of work on this topic: that produced by local researchers, more monographic in nature and inclined to be descriptive and greatly bound to documental contents; that concerned with a particular plan from a particular engineer, generally without checking the geomorphological conditions and historical dynamics that motivated them; and those arising from academic research work. These ultimately aimed to tackle economic and social issues, although they still required a geomorphological and climatic contextualisation, as well as having to reference buildings and infrastructural improvements, taken as reflecting or influencing historical dynamics.

From an historical point of view, moreover, works summarising royal policies and the jurisdiction of central authority in relation to seaports, did not add much. They only explained which institutions were subsequently in charge of the public works carried out on these areas, but not really the tendencies and implications of their policies. One goal of the Hisportos project was to shed light on these aspects through an analysis of the infrastructural construction of seaports.

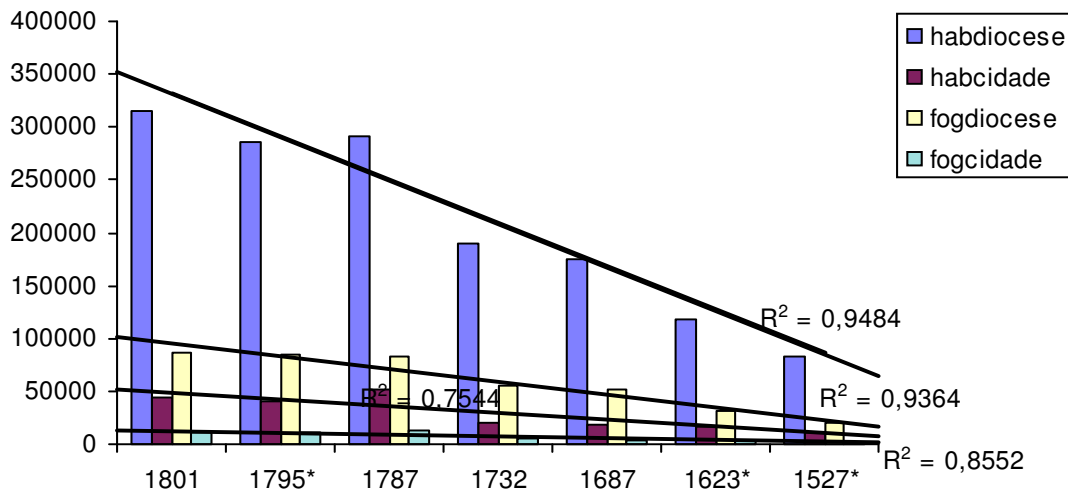
The work achieved by Hisportos until now is only the first step of a larger programme, which involves, in the future, a specific study centred on economic dynamics: the definition of key sectors of the local seaport economy - fisheries, ship construction, transport and navigation, local, international or overseas trade, finances; industry, and the intersections between them, as well as its articulation with conjunctural and structural tendencies, and the definition of economic strategies overtimes. This paper comprises a contribution to this aim, to be pursued in the future.

III. The diachronic evolution of the Northwest Portuguese seaport hierarchy in the Early Modern Age (16th-18th centuries)

Taking the theoretical aspects mentioned above into account, we will proceed with an analysis of the relative importance of the each port in NW Portugal. It is nevertheless important to understand that the political-administrative status of the NW ports is different from that of Lisbon, which immediately ranks them differently, both in terms of centres of power, and in terms of access to the dynamics of colonial affairs. Lisbon was the kingdom's capital since the Middle Ages, and, since the sixteenth century, the capital of a vast overseas empire. This fact would

owing to a monopolistic overseas trade policy which involves the gold and oriental drug trades. However, its shipyards, renowned for their vitality and quality, built many of the ships destined to sail the Indian Route, and the city contributed, as well as other NW ports, to the crews that sailed in the Cape Route.

Porto – Demographic evolution (1527-1801). Inhabitants and dwellings⁸



Source: OSSWALD, Helena – “A evolução da população na diocese do porto na época moderna”
 In 1º. Congresso sobre a diocese do porto. *Tempos e lugares da memória - Actas*, Porto, 2002, p.73-95

The overseas trade movement in the seventeenth century is characterised by a diverse conjunctural setting, in which Porto, as well as Viana do Castelo, both seaports located in NW Portugal, gained a growing prominence in relation to Lisbon, particularly with regard to a new bearing in Portuguese colonialism: Brazil, on which the Portuguese monarchy and society placed high stakes as an alternative to the manifest crisis of the oriental spice trade, apparent since the 1560s. Brazilian trade followed routes that were not controlled administratively, which bolstered the operation of a system lacking a centralizing port. This fact allowed each port to become involved with men and capital in a promising trade movement, in which sugar became central. It's trade circuit counted on Brazil as a source, on Portugal for its redistribution hubs, and on Europe, Northern and Mediterranean, for its guaranteed markets. Customs revenues clearly express this progress, and It is by using this indicator that we shall endeavour to develop a first approach to identifying a seaport hierarchy.

⁸ **Legenda:** inhab.diocese; inhab.city; dwelldiocese; dwellcity

Given the lack of systematic customs records for the ports at hand, the analysis of their relative commercial prominence is based on three sets of documentation:

- A. The State budgets from 1526 and 1557⁹ and the revenue of some maritime customs-houses in the period 1602-1607¹⁰;
- B. The values of customs rents in the NW ports, from the years 1525 and 1554 to 1557¹¹;
- C. The values of extraordinary taxes, imposed by the Portuguese crown, to be paid by the kingdom's different districts, in 1612 and 1631¹².

From the analysis of the data collected some key ideas can be highlighted:

1. The exponential increase in customs revenue from maritime ports, going from about 15 *contos*¹³ in 1526 to about 62 *contos* in 1557, and to 178 *contos* in the period 1602/07. These increases are owing largely to extremely high inflation rates.
2. The uncontested supremacy of Lisbon, which reached throughout the different chronological periods over 60% of the customs revenues of maritime ports, reaching the highest value in the samples: 84% in the period 1602-1607.
3. The unquestionable standing of Porto as the second customs trading post, achieving rates at the national level varying between 15% in 1526, about 10% some 80 years later, and in a tendency that is difficult to understand, only about 5% in 1557, a lower value than Viana do Castelo. Nevertheless, in the consulate's tax revenues in 1601 and 1622, Porto reached rates of 10% and 14%, respectively.¹⁴.
4. The taxes of the Northwest customs-houses, including Aveiro, achieved overall rates that vary between 30% in 1526, 12% in 1557 and about 14% in 1602/07. If we exclude the immense fiscal weight of Lisbon, reaching around 80% in the last two periods analysed, the proportional fiscal significance of the trading activity of the Northern ports becomes relevant within the national context.

⁹ AGAL- Lv. Reg. Geral Alf. V. Conde, Fls. 194-195. Publ. João Cordeiro Pereira, João Cordeiro Pereira, *A receita do estado português no ano de 1526. Um orçamento desconhecido* in "Estudos de História de Portugal", vol. II. Séc. XVI-XX. "Homenagem a A. H. de Oliveira Marques", Lisboa, 1984, 52-55 ; ADP(Porto District Archive)- Contadoria da Comarca do Porto, lv. 20, fl. 341-348v

¹⁰ *Livro primeiro do Governo do Brasil* . (1607-1633)., Rio de Janeiro, 1958, 178. Publ. Leonor Freire Costa, *O transporte do Atlântico. As frotas do açúcar (1580-1663)*, Lisboa, 2000, 92

¹¹ AGAL (General Archive of Lisbon Custom House), Lv. Reg. Geral Alf. V. Conde, Fls. 194-195. Publ. PEREIRA, João Cordeiro, 1983 ; ADP (Porto District Archive) , Contadoria da Comarca do Porto, Lv. , lv. 20, fl. 341-348v

¹² Eduardo Freire de, *Elementos para a história do município de Lisboa, 1882-1891*, II, 289-290; Biblioteca da. Ajuda-51-X-3 . Publ. Leonor Freire Costa, *O transporte do Atlântico. As frotas do açúcar (1580-1663)*, Lisboa, 2000, 90. (Ph D Thesis)

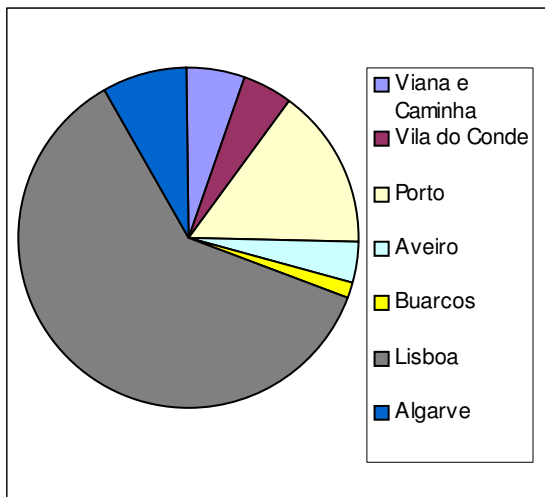
¹³ "Contos" was the major unit of Portuguese monetary system until the twenty century.

¹⁴ Cf. Leonor Freire Costa, *O transporte do Atlântico. As frotas do açúcar (1580-1663)*, Lisboa, 2000, 94 (Ph D Thesis).

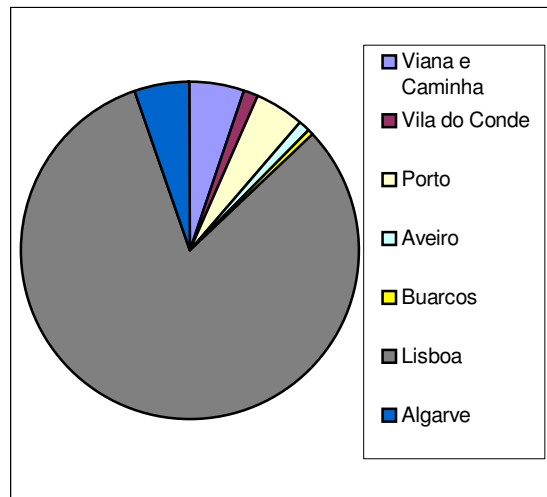
A. The evolution of Customs Revenue from selected ports. 1526-1602/07

Ports	Revenue (in reais) 1526	%	Rents and revenue 1554/1557	%	Revenue (in réis) cc. 1602-1607	%
Viana and Caminha	808.000	5.47	3.300.000	5.33	5.353.000	2.99
Vila do Conde	707.000	4.79	750.000	1.21	606.000	0.34
Porto	2.252.500	15.25	3.000.000	4.85	18.180.000	10.15
Aveiro	600.000	4.06	650.000	1.05	1.515.000	0.85
Buarcos	200.000	1.35	350.000	0.57		
Peniche			-		848.400	0.47
Lisbon	9.000.000	60.94	50.500.000	81.59	149.985.000	83.74
Algarve	1.200.000	8.13	[3.343.178]	5.40	2.626.000	1.47
TOTAL	14.769.026	100	[61.893.178]	100	179.113.400	100

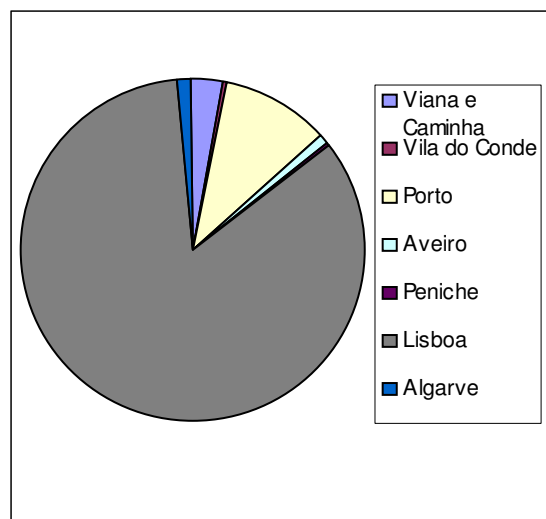
Customs revenue in 1526 (Budget)



Customs revenue in 1557 (Budget)



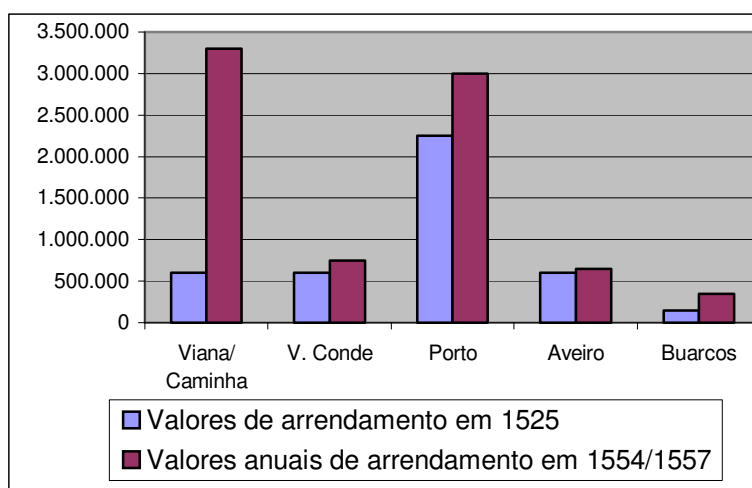
Customs revenue rents in 1602/07



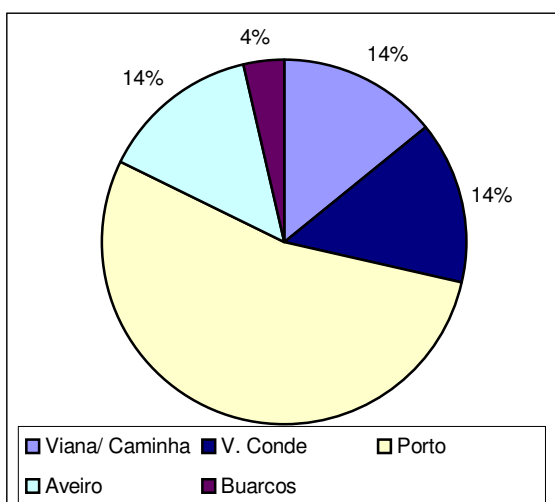
Sources: AGAL- Lv. Reg. Geral Alf. V. Conde, Fls. 194-195. Publ. João Cordeiro Pereira, João Cordeiro Pereira, *A receita do estado português no ano de 1526. Um orçamento desconhecido* in "Estudos de História de Portugal", vol. II. Séc. XVI-XX. "Homenagem a A. H. de Oliveira Marques", Lisboa, 1984, 52-55 ; ADP(Porto District Archive)- Contadoria da Comarca do Porto, lv. 20, fl. 341-348v. *Livro primeiro do Governo do Brasil*. (1607-1633), Rio de Janeiro, 1958, 178. Publ. Leonor Freire Costa, 2000, p. 92

5. The bolstering of the importance of the Viana do Castelo port, vying with Porto in the 1554-1557 rents. The rise of Viana do Castelo from 14.3% of the total revenue from NW ports in 1526 to 41% in 1557 is highly revealing of this port's ascension as a trading post by the second half of the 16th century. The Brazilian sugar trade is undoubtedly part of this clearly growing tendency in tax revenues from these two ports (Porto and Viana).
6. The drastic reduction in trade movement in the smaller ports of NW Portugal, as well as in the rest of the kingdom, especially Vila do Conde, Aveiro and the Algarve ports, dropping from a rate of 8.1% in 1526 to 1.5% in 1602/07.

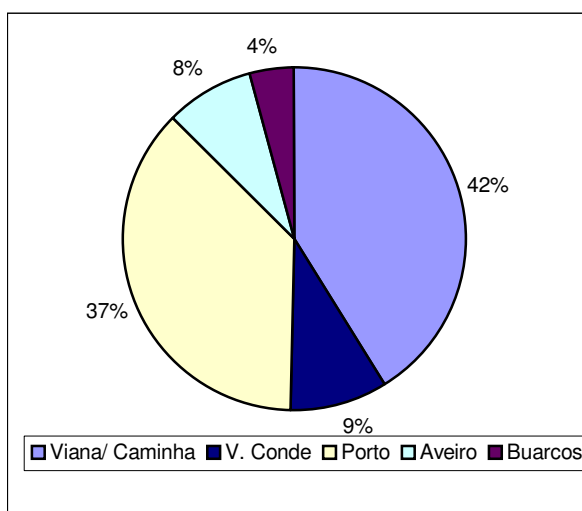
B. Customs revenue of the Entre-Douro-e-Minho, Aveiro and Buarcos ports¹⁵



1525



1554/57



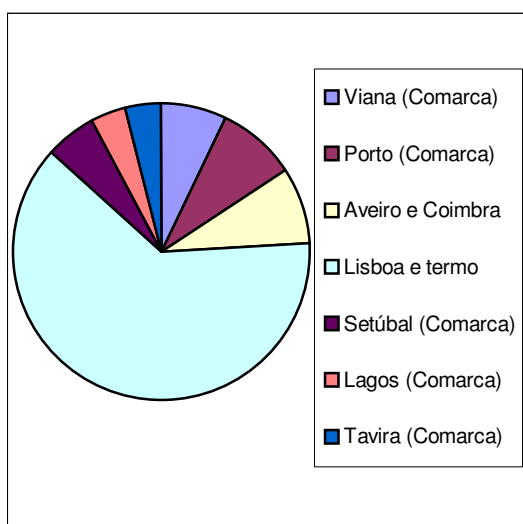
Sources: IAN/TT (National Archive- Torre do Tombo) – NA 590; ADP (Porto District Archive) – Contadoria da Comarca do Porto, lv. 20, fl. 341-348v

¹⁵ Legend: Rent values in 1525 /Annual rent values in 1554/1557

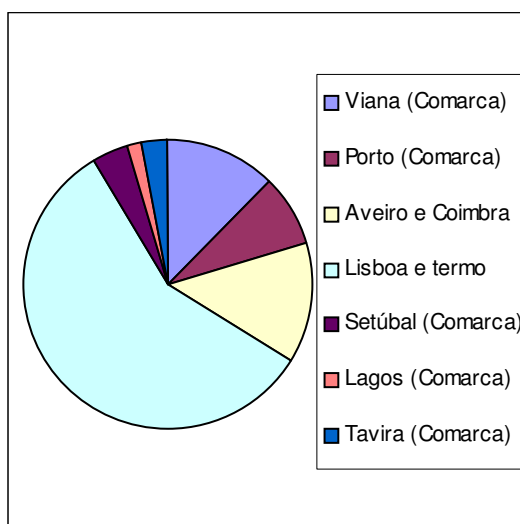
C. Distribution of extraordinary taxes by districts surrounding maritime areas

District	1612		1631	
	Amount (cruzados)	%	Amount (réis)	%
Viana (District)	13.000	7.3	9.441.507	12.4
Porto (District)	15.000	8.4	6.205.643	8.1
Aveiro and Coimbra	15.000	8.4	10.248.657	13.4
Lisbon and surroundings	110.000	62	43.620.000	57.2
Setúbal (District)	10.000	5.6	3.393.260	4.4
Lagos (District)	7.000	3.9	1.200.000	1.5
Tavira (District)	7.000	3.9	2.148.903	2.8
Partial Total	177.000		76.257.970	

Year 1612¹⁶



Year 1631



Sources: : OLIVEIRA, E. Freire de, Elementos para a história do município de Lisboa, 1882-1891, II, 289-290; Biblioteca da Ajuda- 51-X-3 . Publ. Leonor Freire Costa, *O transporte do Atlântico. As frotas do açúcar (1580-1663)*, Lisboa, 2000, p. 90. (Ph D Thesis)

If we take next the values of the extraordinary taxes demanded by the Philippine monarchy, some other tendencies should come up. These taxes do not, however, reflect an accurate view of reality, but rather the view that the central power had of the reality of the kingdom, in this case a distant royal power seated in Madrid. In fact, the values set by the crown may reflect a view it held of the hierarchy of the national spaces in terms of tax-paying capacity,

¹⁶ Legend: "Comarca" is an administrative district

at a time when the transformations of the kingdom's economy were perceived by central power with significant chronological lags.

Most noteworthy in this 20-year period is the undeniable increase in expectations with regard to the Northern districts (Porto and Viana do Castelo), which go from a rate of 15.4% in 1612 to 20.5% in 1631, together with a reduction in the expected contribution from Lisbon and its administrative region, at about 5%, and the consistent drop of the Southern districts, including the Algarve, going from 16.4% to 8.7% in 1631. It is true that we are now focusing on vaster hinterlands rather than only on the coastal strips, but the port trading posts located there continue to play a key role.

Criticism of the last sources undervalues their reliability. But, even if we take the indicators derived from customs revenues, they are not necessarily synonymous with the intrinsic commercial vitality of the several seaports considered. This fact is especially notable in the case of Vila do Conde, at a time when the existence of a private customs-house, without royal control, exercised distorting effects on customs movements, owing to the practice of discounts and subsidies, which led to the customs clearing of merchandise destined in fact to other coastal locations, from Caminha to Porto. This port, operating as a maritime trading post to the vast hinterland of Entre-Douro-e-Minho, also attracted significant import and export cargos from capital merchants from Braga, Guimarães, Chaves or Barcelos, in higher percentages than those of merchants from the town itself. In fact, the commercial and financial capacity of this merchant community was notoriously lower than that suggested by the weightings achieved in customs revenues in 1526, for example, even though the difference is smaller in 1557, year in which some of the distorting factors mentioned are removed, given that the private customs-house was closed¹⁷. These circumstances make configuring an accurate seaport hierarchy in NW Portugal difficult.

Furthermore, some of the kingdom's ports were revitalised by commercial capital coming from financial investments from other merchant ports and communities, which, as a result of opportunistic circumstances and the strategies at work proper to merchant networks, relocate their business transactions to certain ports to the detriment of others.

These strategies were documented for Vila do Conde in the first decades of the seventeenth century, in connection with the New Christian merchant communities of Porto¹⁸ and for the port of Viana do Castelo, whose import trade of Brazilian sugar was probably sustained by

¹⁷ Cf. Amélia Polónia, *Vila do Conde. Um porto nortenho na expansão ultramarina quinhentista*, Porto, 1999, I, 557-574 (Ph D Thesis)

¹⁸ Cf. Amélia Polónia, *Vila do Conde. Um porto nortenho na expansão ultramarina quinhentista*, Porto, 1999, I, 586-595. (Ph D Thesis)

commercial partnerships involving merchants and capital from Lisbon, taking advantage of a customs tax system which was clearly beneficial. It was also easier here to evade the embargoes the Philippine monarchy imposed on the ships and economic agents from the United Provinces, traditional trade partners of Portugal, especially in terms of the Brazilian sugar traffic.

This strategy implies the existence of internal migrations of commercial agents, the transfer of capitals and the existence of merchant networks among the different maritime locations, thus diluting a pyramidal seaport hierarchical order, the traditional perspective when analysing seaport dynamics.

On the other hand, even if we analyse this alternating play in relevance, favourable to the ports in the North, particularly Porto, as a result of inter-port networks, it is undeniable that internal consequences inevitably occur in these expanding city ports. That is, regardless of the mechanisms, whether or not they were artificial, that drive the mercantile prominence of certain ports, the implications that such a dynamism internally imprints on a port area and community remain unquestionable, owing to: the logistical complexity they imply; the changes in their socio-professional structures; the direction taken by strategies of capital investment; the centripetal character they acquire in terms of population; the indexes of growth in wealth and levels of fortune they prompt; the economic, social and even artistic revitalisation, prompted by a growing cosmopolitanism which also attracted foreign communities, as is the case in Viana do Castelo around the Brazilian sugar and in Porto, around the codfish trade, in the hands of English merchants.

At the same time, an analysis of notary records, both in Porto and Lisbon, prove the existence of strong inter-port complementarity at the regional level. Regarding the main profile of each port it seems to be possible to distinguish between shipbuilding and ship owning ports (which provided seamen and fleets) , and commercial trade ports. In the Brazilian circuits, Lisbon, Porto and Viana were important traffic ports, surrounded nevertheless by smaller ports, which gain or lose vitality according to the positive or negative conjunctures of the head ports. The place of origin or residence of the ships masters involved in the traffic through Lisbon and Porto between 1580 and 1640, allows us to gauge the standing of Brazilian trade, particularly that of sugar, in the port economy of the different maritime centres which gravitate around the main one.

The number and percentage of vessels supplied to Lisbon by service ports (1580-1601)

Ports		
	Nº	%
Lisbon	94	44.5
Setúbal	8	3.8
Alcácer	2	0.9
Sesimbra	18	8.5
Sines	1	0.5
Cascais	4	1.9
Peniche	24	11.4
Atouguia	9	4.3
Buarcos	3	1.4
Mondego	2	0.9
Porto and surroundings	30	14.2
Viana	5	2.4
Foreign	3	1.4

Source: Costa, Maria Leonor Freire, "Redes interportuárias nos circuitos do açúcar brasileiro. O trajecto de Gaspar Pacheco, um banqueiro de D. João IV!", in CUNHA, Mafalda Soares da (coord), *Do Brasil à metrópole. Efeitos sociais*. Évora, 2001, 36

The number and percentage of vessels supplied to Porto by service ports (1580-1601)

Ports		
	Nº	%
Porto	57	34.3
Massarelos	40	24.1
Matosinhos	27	16.3
V. N. Gaia	3	1.8
Miragaia	14	8.4
Leça	3	1.8
Foz	1	0.6
Viana	3	1.8
Caminha	1	0.6
Esposende	2	1.2
Azurara	3	1.8
Aveiro	2	1.2
Buarcos	1	0.6
Peniche	1	0.6
Lisbon	2	1.2
Foreign	1	0.6
Not identified	5	3

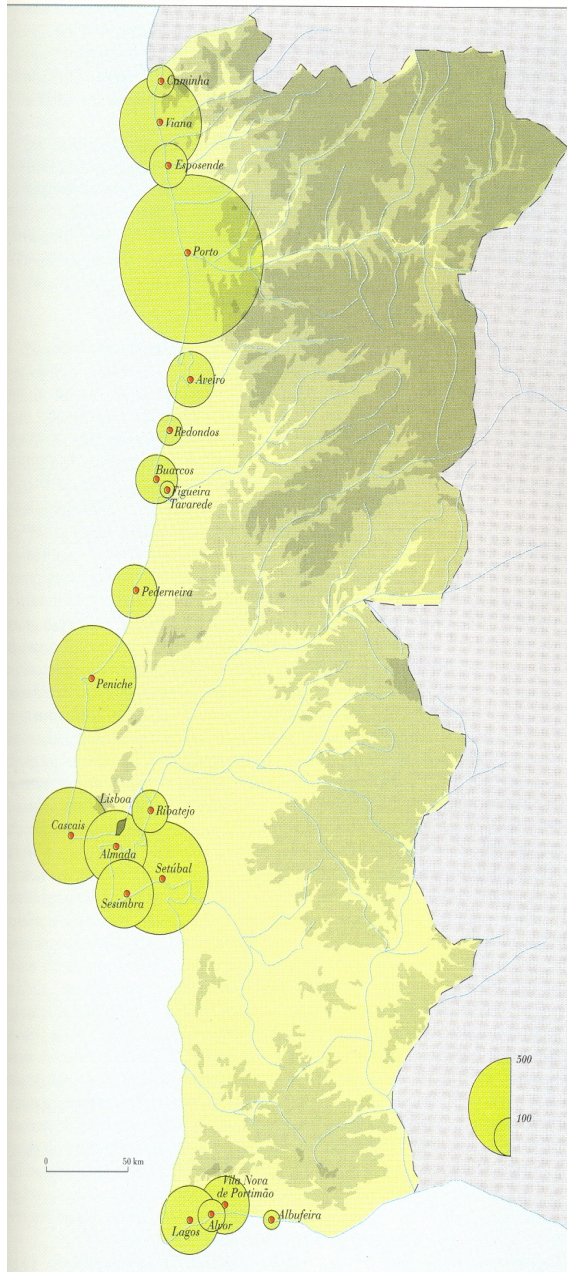
Source: Costa, Maria Leonor Freire, "Redes interportuárias nos circuitos do açúcar brasileiro. O trajecto de Gaspar Pacheco, um banqueiro de D. João IV!", in CUNHA, Mafalda Soares da (coord), *Do Brasil à metrópole. Efeitos sociais*. Évora, 2001, 37

The maps that follow confirm the status of the little or medium ports as service ports. They intend to show the distribution of seamen in Portugal seaports in the late sixteenth and the early seventeenth centuries in order to present the distribution and relative standing of each port in what concerns seamen¹⁹. In contrast with the tax custom values presented above, the

¹⁹ In what concerns the general supply of seamen all over Europe see, among others, ARMSTRONG, John; KUNZ, Andreas, eds. – *Coastal shipping and the European Economy. 1750*, Mainz, 2002; VAN ROYEN, Paul; BRUJIN, Jaap; LUCASSEN, Jan, eds. – *Those emblems of hell*. In *Research in Maritime History*, no. 13, 1997, as well as

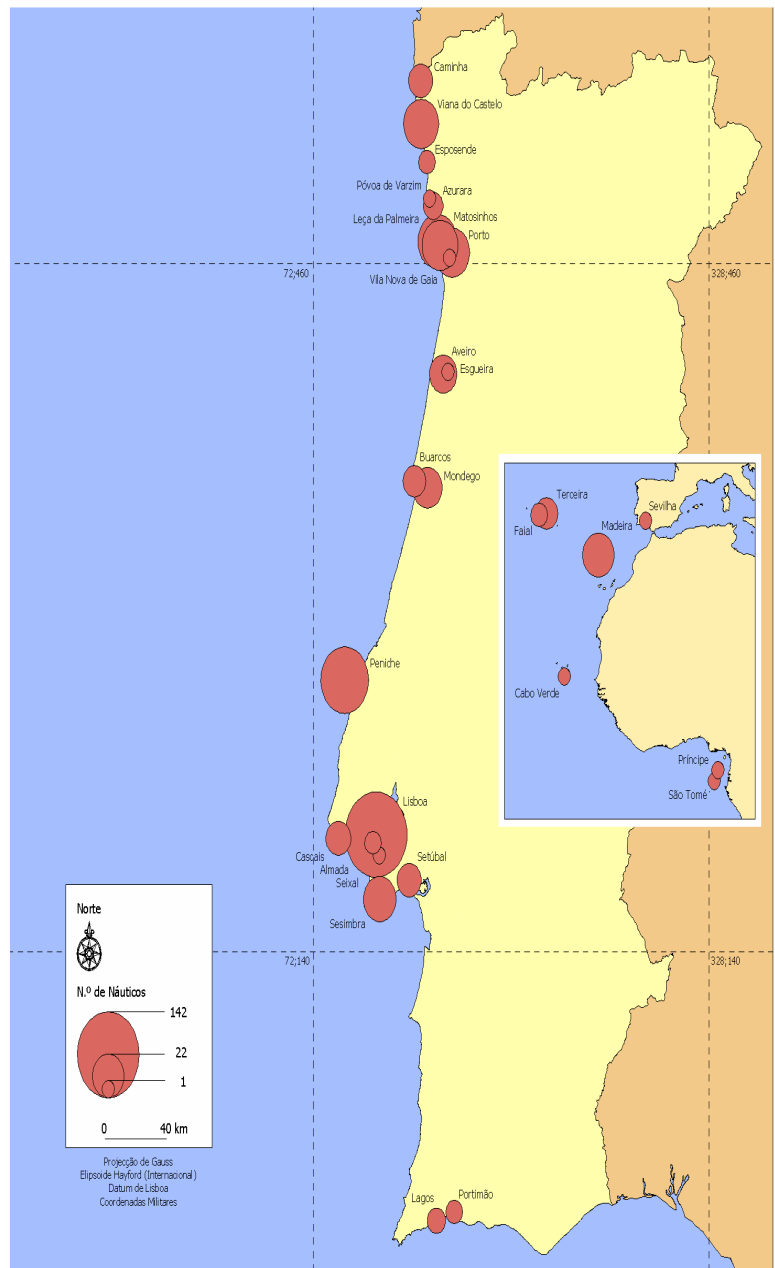
seafaring communities are spread, with significance, all over the Portuguese coast, and the ranking of each port is clearly different in this representation to the one above, regarding taxes on commercial movement.

Distribution of seafaring communities in 1620



Source: José Mattoso, dir.- História de Portugal, Lisboa, 1993, III, 239-

Seamen examined between 1596-1648²⁰



Source.: Amélia Polónia/ Miguel Nogueira

McCABE, Ina Baghdiantz , HARLAFTIS , Gelina; MINOGLU, Ioanna Pepelasis, eds. - *Diaspora Entrepreneurial Networks: Four Centuries of History*. Geneva, 2005.

²⁰ References to the examination of seamen by the “Cosmógrafo-mor do reino” (the principal cosmographer of the kingdom), in order to obtain a license to navigate in transoceanic routes: Africa, Brazil, Cable Route , and even to Castilian Indies in the period of the dynastic union with Spain.

These minor ports, providing services, with a strong position and interest in shipping but not necessarily in finance and colonial trade in a great scale, lived largely according to the pace imposed by the commercial ports. This seems to be the case of Setúbal, Sesimbra, or even Peniche, gravitating around Lisbon, and Matosinhos, Leça, Azurara or Vila do Conde, which sustain both the shipyards and the trade movements of the city of Porto, by providing men and ships.

Once more we verify that there are operative networks and complementarities. Consortia among ship owners of diverse geographical and professional origin are frequent, a fact dating back to the sixteenth century²¹. This means that the cycles of prominence or retraction in the trade movement of a port affect not only the internal socio-economic dynamics of that port, but also the port economy of all those that gravitate around it.

This situation leads us to a conclusion: the changes in the position of the port of Lisbon with regard to Brazilian trade, one of the most structuring elements of port movements in seventeenth century Portugal, and the corresponding rise of Porto as receiving port, resulted in shock waves in the economies and societies of the port towns gravitating around them and, thus, in the port complex of NW Portugal as a whole.

Another consequence of the changing ranking of Porto and Lisbon in the Brazilian trade concerned the redistribution circuit for sugar and other colonial products. The Portuguese merchant fleet, drained, in the seventeenth century, by privateer attacks, the participation in the defeat of the “Invincible Armada”²², and the Restoration of independence war, between 1640 and 1668, was unable to respond to the increasing demand for transport services, thus leading to a clear predominance of foreign ships in the links between Portugal and Europe. This negative context is, in parallel, increased as result of the Westminster Treaty, in 1654, which opens the Portuguese trade to British merchants.

This reduction in the availability of shipping in Portuguese ports, and the notorious predominance of foreign fleets in Portuguese trade circuits was even increased by foreign restrictions on maritime transport, such as the British *Navigation Acts*, and was necessarily reflected, in the increasing precariousness of the small ports of the NW, which traditionally provided these services to the commercial ports.

²¹ Amélia Polónia, *Vila do Conde. Um porto nortenho na expansão ultramarina quinhentista*, Porto, 1999, I (Ph D Thesis)

²² “Invencível Armada” was the expression used by Spanish crown to identify the fleet composed to fight British navy in 1588. A great number of Portuguese ships were among those which were destroyed by the defeat of the Spanish navy, formed mostly by trading ships from all over the Spanish empire, including Portugal.

This situation was aggravated and heightened in the course of the eighteenth century. At this time, Porto was specialising in the export of Port wine, without however losing contact with overseas trade, though this was somewhat restricted to the trade movement at its river-mouth bar, whereas Lisbon maintained and boosted a leadership and central role, associated with some key overseas products, such as sugar, cotton, gold, tobacco and diamonds. In the eighteenth century, Lisbon re-established its standing as monopolistic epicentre of colonial trade through the clear interference from the central power. This was done through policies of trade exclusiveness, guaranteed by the creation of monopolistic companies, sustained by the State itself, which pursued eminently mercantile economic directives.

The policies of the Marquis of Pombal were directed towards promoting favoured economic groups, such as the Chambers of Commerce and, at the same time, at restricting free trade, while promoting the global trade corpus of Lisbon and Porto: in 1753, he founded the Asia Trade Company; in 1755, the Grão Pará e Maranhão Company; in 1756, the Alto Douro Wine Company, and in 1759, the Pernambuco and Paraíba Company, renewing also the monopolistic tobacco and soap contracts.

At the same time, access to capital was constrained by means of restrictive deliberations with regard to loans and interest, while a law of 1755 was passed, against “travelling commissaries”, small merchants linked to the trade with Brazil, whose dealings were identified as contraband. It was an attempt on the part of the State to reduce the social mass involved in trade to a selective and privileged minority, mostly concentrated in Lisbon, near to the circles of power.

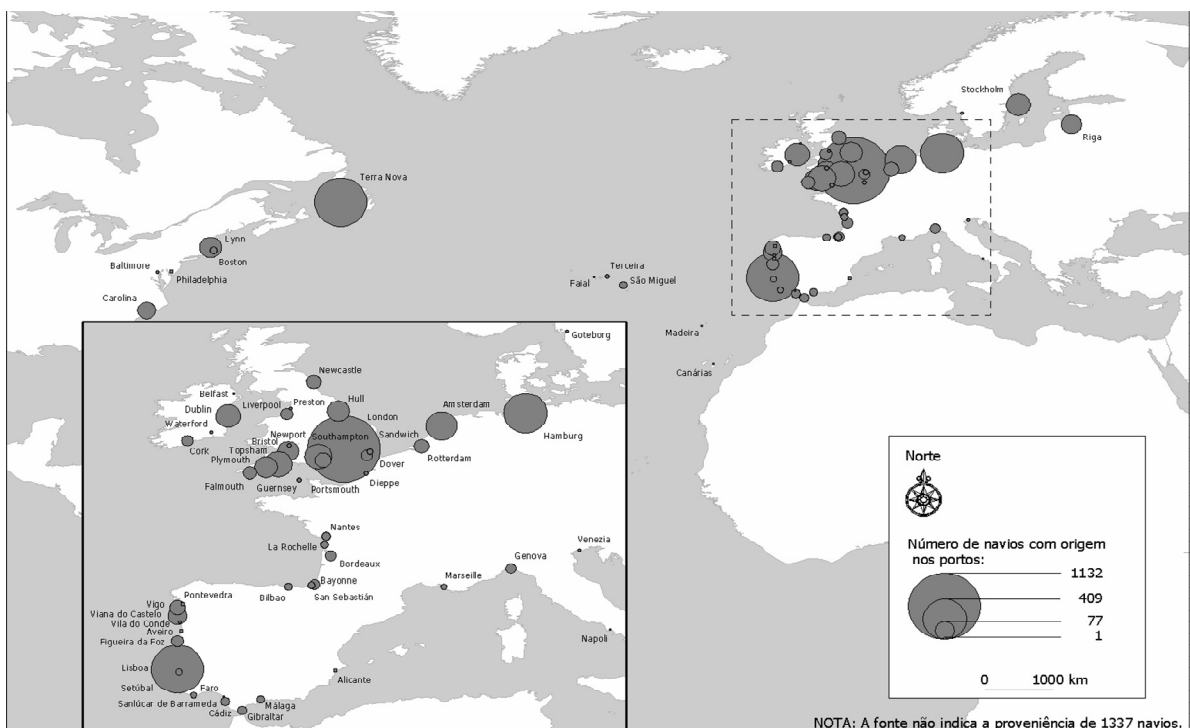
This commercial legislation, based on privilege and monopoly, was implemented so as to concentrate profits from higher colonial and international trade, thus safeguarding against the threat of sharing amongst a multitude of competitors²³. It is for this reason that strict exclusivity was maintained in navigation and trade with the colonies. By contrast, the international circuits were left free, owing to the inability of the Portuguese authorities to control them and the ability of foreign trade agents to dispute and gain control of the international redistribution of Portuguese colonial products.

This economic dynamic profoundly affected the small and medium-sized ports of NW Portugal, changing their ranking and status within the regional and national port system. At the same time it also interfered with the intensity of the inter-port complementarity networks in the

²³ Cf., about this issue, Jorge Borges de Macedo, *A situação económica no tempo de Pombal*. Lisboa, 1989; *Elementos para a história bancária de Portugal (1797-1820)*. Lisboa, 1982; *O Marquês de Pombal, 1699-1782*. Lisboa, 1982; David Justino, *A formação do espaço económico português*, 2 vols. Lisboa, 1988-1989; FISHER, H.E.S.. *The Portugal trade 1700-1770*. Londres, 197; Jorge M. Pedreira, *Os homens de negócio da praça de Lisboa. De Pombal ao Vintismo (1755-1822). Diferenciação, reprodução e identificação de um grupo social*. Lisboa, 1995 (Ph D Thesis).

NW area, woven as they were around maritime logistics. Shipbuilding and transport were suffering by the diminishing role of the Portuguese fleet in the colonial and especially European routes. These seaports, like Caminha, Vila do Conde, Azurara and even Viana do Castelo, which had been active and had grown steadily during the sixteenth and seventeenth centuries, in close connection with Porto or Lisbon, now lost a large part of their relevance and internal dynamics. This situation was dictated both by the changing dominance within maritime transport, which was now favourable to trade agents, fleets and ports of Northern Europe, and by a highly centralising and oligarchic economic policy, orchestrated by a State that stimulates again the leadership of Lisbon.

Main provenance of vessels arriving to Porto (1704-1747)



Source: António Barros Cardoso, *Baco & Hermes. O Porto e o comércio interno e externo dos vinhos do Douro (1700-1756)*, Porto, 2003, II, 84.

Entries at the Douro River bar (1704-1747). Ships by nationality of shipping agent

Nationality of shipping agent	No. of ships	%
Portuguese	500	8.3
English	4562	76
Dutch	435	7.2
Hamburger	405	6.7
French	93	7.5
Not identified	9	0.1
Total	6004	100

Source: António Barros Cardoso, *Baco & Hermes. O Porto e o comércio interno e externo dos vinhos do Douro (1700-1756)*, Porto, 2003, II, 78

The reality of these changes in the status of North Western ports may be comprehended from fluctuations in wealth, demographic indicators, and especially from periodic investments in harbour works in the ports, a good indication of the survival, growth or decline of the various North Western ports within a broader seaport system.

IV. The evolution of the North Western seaports between the sixteenth and eighteenth centuries: the evidence of harbour construction

In fact, some of the topics most relevant to a discussion of seaport status are derived from indices of harbour works. It is imperative to discover whether the historical contexts proves to have been decisive in the construction of port infrastructures, assuming that their influence could likewise be detected in the ports studied, depending on their economic strength, geomorphological configuration and their changing over time .

The distribution pattern of harbour works over time, compared with the dimension of the individual ports, drawn by Hisportos databases²⁴ should prove useful as an approach to this issue:

The number of harbour works in Northwest ports between the fourteenth and eighteenth centuries

Seaport	Seaport Dimension ²⁵	14 th -15 th Centuries	%	16 th Century	%	17 th Century	%	18 th Century	%	Total	%
Caminha	Small	2		0		5		5		12	100
Viana Castelo	Medium	3		8		6		7		24	100
Vila do Conde	Small	1		16		17		3		37	100
Porto	Major	2		18		27		50		97	100
Aveiro	Medium	0		1		10		57		68	100
Total		8	3.8	43	20.2	65	30.5	122	57.3	213	100

Source: Hisportos databases. www.hisportos.com

We now cross these results with some variables related to seaport construction policies, in order to explain the previous scenario.. Data distribution of the funding of works, whether by central or local entities, should provide a useful approach:

²⁴ www.hisportos.com

²⁵ According to a scale only applicable to NW Portuguese seaports. The criteria applied favoured demographic indexes, harbour commodities; regional and long-haul trade traffic, shipbuilding, transportation logistics, and financial power.

Funding and financing approval – diachronic distribution

Entities	Diachronic Distribution	Seaports	No.	Total	%
Central power	14 th -15 th Centuries	Viana do castelo	1	1	
	16 th Century	Vila do Conde	3	4	
		Porto	1		
	17 th Century	Viana do castelo	2	15	
Vila do Conde Porto		7 6			
18 th Century	Porto Aveiro	5 3	8		
Sub-Total				27	
Local power	14 th -15 th Centuries	Caminha Viana do castelo	1 1	2	
	16 th Century	Viana do castelo	2	4	
		Porto	2		
	17 th Century	Caminha	1	11	
Vila do Conde		5			
Porto		5			
18 th Century	Viana do castelo	1	3		
	Porto	1			
	Aveiro	1			
Sub-Total				20	40
Third parties	14 th -15 th Centuries	Caminha	1	3	100
		Viana do castelo	1		
		Vila do Conde	1		
	16 th Century			0	
	17 th Century			0	
	18 th Century			0	
Sub-Total				3	6
Total				50	100

Source: Hisportos databases. www.hisportos.com

Some key ideas can be emphasised from the analytical framework of the tables above:

1. The number, as well as the complexity, of the technical interventions rise in the seventeenth and eighteenth centuries. The occurrences registered in times prior to 16th century are notoriously low, even when considering the lack of documental sources for this period.
2. The number of works funded by the central power increased notoriously in the seventeenth and eighteenth centuries in comparison with local power initiatives, even though, against the backdrop of war throughout the seventeenth century, both seem to be significant²⁶.

²⁶ The significant number of local authority interventions in Vila do Conde can only be explained because of its manorial jurisdiction.

3. The eighteenth century investments by the crown seem to be exclusive to the bigger Northwest ports: Porto and Aveiro.

Understanding some contextual constraints may be useful in a comprehensive interpretation of the tendencies presented in the tables above:

1. The construction of seaports and harbours should be explained according to political, military and economic contexts. Whereas the number of interventions in the sixteenth century, namely in Vila do Conde and Porto, mostly directed at the navigation viability of harbour entrances and the construction of quays and docks, are connected with the importance and prominence of the trade movement in these ports, in direct connection with overseas trade and navigation, those that took place in the seventeenth century, mostly directed at the building and maintenance of fortifications and other defence structures, are above all associated with the Restoration War (1640-1656) between Portugal and Spain.

The interventions conducted in the eighteenth century must be understood in a distinct context and according to new variables. Even though the economic dynamics undoubtedly still count, strategic planning, in terms of central power policies, has now to be increasingly considered.

2. The number of interventions reflects a reality expressed by other demographic or economic indicators, , points to the decline of small ports, such as Vila do Conde and Caminha, or even Viana do Castelo, at a national and international level, during the seventeenth century, but more especially in the eighteenth century. This reality is connected not only with their internal dynamics, but with a funding policy which selects the main seaports and seems to exclude smaller communities and small economic agents, which dominated in those peripheral spaces, from their economic strategies. The economic policy of the Marquis de Pombal (1750-1777), which favoured the Porto and Lisbon merchant communities, launching trade, fishing and agricultural monopolies (like the case of the Brazilian trade Companies; the Algarve Fisheries Company, and the Port wine viticulture and trade Company (Companhia da Agricultura e Vinhos do Alto Douro), is one of the key measures responsible for this tendency, which reflects on seaport logistics maintenance and construction, or at least, on a significant part of it.

Since, as we have seen, these structures depend on central power funding, their maintenance, even when justified at a regional level, was not supported by the requisite investments in infrastructure. This tendency led to changes in the interregional port system in NW Portugal, questioning the traditional logistic complementarities between smaller and bigger ports, and diminishing the relevance of small seaport towns in relation to their hinterlands, through the lack of infrastructural conditions necessary to support maritime traffic, only guaranteed by bigger vessels and adequate warehouses and custom houses.

It presumes the transformation of relatively important seaports, even on a small or medium scale, into “unimportant Ports”, in the sense proposed by Gordon Jackson: “Those with a poor or backward

hinterland and few external connections; with a small or no share of national imports and exports and, contrary to expectations, a small share of coastal trade, which was also dominated by major ports; with exceptions they owned and built few ships; they had inadequate facilities for larger ships; few warehouses; no comprehensive mercantile community or direct foreign linkages; few industries and small populations; in sum, they had no opportunity for self generated trade"²⁷.

The comparative evolution of infrastructural investments which were analysed in the long term (sixteenth - eighteenth centuries) seems to determine the irreversible loss of status and economic capability of the smaller ports of NW Portugal, with benefit to Porto, despite, serious accessibility problems, caused largely by its geomorphological constraints.

3. If the implementation of infrastructural interventions in Porto can be understood in a context of economic growth, the case of Aveiro is quite distinct, and explains another dimension of seaport construction. In fact, Porto dominated the national and international Port wine trade in the 18th century. The Douro River and the entrance to the Douro harbour figure as pivotal factors at a regional and international level, in order to facilitate the connection with regional and international markets. The development of its port logistics and the concern with the viability of its maritime access are, in this context, understandable and justified.

But Aveiro suffered, at this time, the decline of the salt trade, its traditional trade basis, and no other product appears to substitute it, in a setting in which the seaport presented serious geomorphological problems. The urgency of rebuilding the seaport was a persistent claim defended by the local authorities and economic agents. Between 1759 (when the port was first closed) and 1808 (the date of the definite settlement of the port), a long list of military engineers (Portuguese, German, French and Italian) passed through Aveiro. Even though actual interventions only began in 1802, with the construction of a dike that conducted and constrained the waters so as to open the port, the multiple interventions by the central power are reflected in the numerous technical operations, paid by the crown, or with its approval, during the 18th century, a period when the customs and other trade and economic revenues could not support the cost of the maintenance of the open harbour. Nevertheless, the works and the engineering planning persisted, in association with other proposals that aimed to promote the Aveiro port, despite all the geomorphological and economic restrictions²⁸.

This model is thus a construction, based on political and economic theories, rather than a promising local or even regional context. The port of Aveiro, during the 18th and 19th centuries, seems in fact to be constructed based on theoretical assumptions and technical experiences rather than on its national or international relevance or even on its local or regional dynamism.

²⁷ Gordon Jackson, *The Significance of Unimportant Ports*. "International Journal of Maritime History", December 2001, XIII , 2, 6

²⁸ Inês Amorim, Portuguese "free" Ports at the turn of the 18th Century – a Strategy to Promote "Unimportant" Ports, in *Proceedings of the 4th International Congress on Maritime History* (Corfu-Greece, 23-27 June 2004), Corfu, International Maritime Economic Association/ Ionian University, (2005). [CD-Rom]

This seems to comprise one of the three models of seaport construction and growth in NW Portugal during the Early Modern Age, where the others two are:

- the small ports of Caminha and Vila do Conde and the one of Viana do Castelo, all of which were destined to become “unimportant ports”, despite their internal and hinterland importance during the 16th century (Vila do Conde and Caminha, associated with overseas trade and navigation), and the 17th century (Viana do Castelo, associated with the Brazilian sugar trade, even though in connection with Lisbon’s merchant community²⁹);
- the pivotal seaport of Porto, with a sustainable economic growth, based on the promising Port wine trade and the export trade of Brazilian products, that brought with them the navigability of the Douro River and significant investments in the Porto harbour, even though the geomorphological constraints of the harbour entrance seemed to dissuade significant investments, and imposed the transference of the harbour, in the 19th century, to Leixões. What was at stake was the centrality of the town, dependent, in the long term, on the superiority of its harbour, and the navigability of the Douro River.

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The definition of these models, explored through the evaluation of investments in seaport construction and economic growth indexes, also raises some other questions, those related to town planning dynamics: the evaluation of urbanization rates intersected with harbour structures and economic indicators; the construction of an urban profile involving or excluding the harbour, the seafronts or the riverfronts; the construction of an architectural image intersected with wealth rates, financing capital and external patterns suggested by the seaport network connections. But also those related to economic and demographic internal rates of growth or decline, which we are not able to discuss now..

²⁹ Leonor Freire Costa, *O transporte no Atlântico. As frotas do açúcar (1580-1663)*, 2 vols.. Lisboa, 2000 (Ph D thesis)