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# SOME CONSIDERATIONS CONCERNING REGULATION AND COMPETITION IN THE PORT SECTOR

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## ABSTRACT:

*The aim of this paper is to discuss the circumstances in which the process of competition between ports takes place in Spain – circumstances arising from the way the port system is currently set up and from the regulations governing it. The importance of this matter lies both in the fact that intensified competition between ports is the way to set about boosting the efficiency of the Spanish port sector and in the relevance of this business to the economies of the regions in which the ports are located. It is precisely for this reason that the reform instituted in 1992 aimed to combine balanced development of the national port system with the defence of the interests of autonomous regions. To this end the current regulatory framework provides for the possibility of port authorities drawing up their own competitive strategies, but makes their implementation conditional upon approval of their business plan by the Spanish state port authority. The latter body coordinates the national port system to ensure the guidelines set by the central government authorities are followed in the field of transport. However, the scale of the differences which exist among both the size of facilities and their relevant markets on the one hand, and the financial and economic circumstances of each of them on the other, suggest that each port authority's needs must be very different. Consequently, their competitive strategies must also be very different. It is therefore valid to ask whether coping with this diversity calls for different guidelines to regulate their freedom of action.*

**Key words:** Competition, regulation, port sector

**JEL classification numbers:** L1, L5, L9

## 1. INTRODUCTION

The current format of the Spanish port system results from the reform instituted by the State Ports and Merchant Navy Act, law 27/1992 of 24<sup>th</sup> November 1992 (abbreviated in Spanish as the *LPEyMM*). Until this legislation went into effect, three management models co-existed, all of them coordinated by the Directorate-General for Ports (Martínez Budría, 1996): Autonomous Ports (Barcelona, Bilbao, Huelva and Valencia), Port Boards of Works (other facilities considered to be of national interest to Spain) and the Administrative Commission for Groups of Ports (ports which were not in themselves separate legal entities). The passing of the *LPEyMM* served to extend the

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Autonomous Ports management model to all facilities, for two purposes: i) to foster efficiency in the sector by involving private initiative in the provision of port services; ii) to protect the economic interests of the autonomous regions in which the ports considered to be of *general interest to the [Spanish] state*<sup>1</sup> were located. To this end the implementation of business criteria in the management of the installations was fostered, the financing of the port system was separated from contributions out of the general Spanish state budget and competition between ports was encouraged. Moreover, the Directorate-General for Ports was replaced with the Public Agency for State Ports (*Ente Público Puertos del Estado*), the function of which is to carry out central government port policy, coordinating and monitoring the operation of the whole system of state-owned ports.

This paper aims to serve as a basis from which the logic of the current regulatory model governing the Spanish port system can be considered in greater depth. This model claims to foster decentralisation in port management while establishing mechanisms for supervising it, focusing on the system of charges and tariffs and its compatibility with the aims established and the structure of the sector itself, within which port authorities have to draw up the competitive strategies implemented at their respective facilities. However, the permitted reductions in the charges levied for special uses of port facilities, set by the regulator, pursue pre-established goals and must be backed up by a business plan agreed upon together with the state port authority. At the same time, the Spanish port system is made up of a set of ports which are as diverse as their strategies are supposed to be. In this scenario, this paper raises the issue of how appropriate it might be to introduce at least a degree of flexibility into the possibility of offering reductions on the charges levied at each port in order to encourage competition within the sector.

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<sup>1</sup> According to article 5 of law 27/1992, a port of *general state interest* is one where any of the following conditions apply: i) international maritime trade is conducted; ii) its area of commercial influence significantly covers more than one autonomous region; iii) it serves industries or establishments of strategic importance to the Spanish economy; iv) its annual traffic and the nature of its maritime trading activity reach sufficiently high levels or meet essential needs of the Spanish economy; or v) due to its particular technical or geographical conditions it represents an essential factor in the security of maritime traffic. According to article 149 of the Spanish constitution, these ports fall under the responsibility of the Spanish central government.

## 2. COMPETITION AND CHARGES IN PORTS: ANALYSIS OF CURRENT IMPLEMENTATION OF REGULATIONS

The economic and service provision regime for ports of general interest act, law 48/2003, in effect since 2004, complements the state ports and merchant navy act, law 27/1992, in the economic/financial area<sup>2</sup>. The objective pursued in the passing of this new act is to adapt the financing of port services to the framework for competition between Spanish ports set up previously (Izquierdo & Vasallo, 2004). To this end, the regulations in force foster a role for private initiative in managing the public port domain and in the provision of services, while fostering the unity of the system through the principle of *solidarity* between facilities. The latter principle means that the port system as a whole has to bear the costs of less competitive ports, and therefore involves transfers of resources from more profitable ports to those with less revenue.

According to the current regulatory framework, ports must compete for traffic in accordance with a series of basic principles: i) autonomous economic/financial management by port authorities; ii) financial self-sufficiency for the system; iii) solidarity between public bodies through the inter-port contribution fund; iv) coverage of operating costs by transferring facilities to users to ensure these costs are fully recovered; and v) freedom to set rates for services provided by port authorities in competition with private initiative, providing the cost of such services is covered. By combining all these principles, the regulator seeks to achieve gains in efficiency by stimulating competition compatible with the maintenance of state supervision of port activities.

The Public Agency for State Ports plays this supervisory role by agreeing with each port authority upon its respective annual profitability target, in line with the overall objective in profitability terms and with the specific circumstances of each facility<sup>3</sup> (competitiveness, forecasts for future demand for its services, provision of infrastructure or geographical location, for example). The Public Agency also manages the structure and distribution of the resources of the Inter-Port Compensation Fund

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<sup>2</sup> Before this, law 62/1997, modifying law 27/1992, strengthened the port authorities' autonomy in management as recognised by the *LPEyMM*, and gave greater weight to the autonomous regions in the decisions made by the port authorities located on their territory.

<sup>3</sup> According to article 26 of the *LPEyMM*, the Public Agency for State Ports must approve the financial and investment programme of the port authorities, fix the criteria regulating economic and commercial relations between them, monitor their management efficiency and compliance with the strategic goals set for each one and coordinate their commercial policy, in particular the international dimension of this, though always maintaining respect for the "principle of autonomous management of the ports".

(FCI)<sup>4</sup> which, while it enables less competitive ports to keep operating, makes them financially dependent on the decisions taken in this area by the fund distribution committee. This situation suggests that their role should be different from that played by the more competitive ports<sup>5</sup> (Izquierdo & Vasallo, 2004).

Moreover, law 48/2003 also establishes the framework within which port authorities have to draw up their competitive strategies in the area of pricing, attempting to overcome the problems arising from the application of the tariff system imposed by law 27/1992. The previous model distinguished between charges<sup>6</sup> (whether for occupation or use of the public domain in the port, for provision of services to the public or for carrying on commercial and industrial activities) and port tariffs<sup>7</sup>, regulated by Ministerial Orders. However, the fact that the use of certain services was obligatory made them services of a public nature whose price was not fixed by law but established by the pertinent port authority. This situation led to claims being lodged before the Constitutional Court which resulted in numerous decisions against the system of tariffs established, and favouring the modification brought in by the law currently in force.

Thus, the old tariffs for services which involved the exclusive or special use of public domain assets in a port, as well as any other obligatory services not also offered on private initiative<sup>8</sup>, became charges<sup>9</sup>, and their status as a service activity was removed, leading to the applicable regulatory framework which applies to things not governed by this law, being that of the public charges and rates act and the general taxation act.

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<sup>4</sup> The resources of the Inter-Port Compensation Fund come essentially from the contributions of the port authorities out of the tariffs they charge. Specifically, from 80% of revenue from the charge for maritime navigational aid services and up to 12% of the revenue from other operations, according to the criterion of the Fund distribution committee, and proposed by State Ports. Revenue from navigational aid services is distributed between all the port authorities in proportion to their efforts to assist navigation, while the rest is used to co-finance maintenance and improvement work for ports with difficulties, as well as backing research, development and innovation work.

<sup>5</sup> For example, by specialising in specific activities or in meeting the traffic needs generated in their immediate surrounding area.

<sup>6</sup> Charges are made for occupation or use of the public domain and have the status of official public charges.

<sup>7</sup> Charged in return for the services provided by the port authorities. They have the status of private charges.

<sup>8</sup> The other services, providing they are not delivered under a monopoly system or imposed by regulations, continue to be considered as private charges.

<sup>9</sup> The charges are taxes which are incurred through i) the exclusive or special use of the public domain, or ii) the provision of services or carrying on of activities under public law specifically in relation to the taxpayer where the services are not used on a voluntary basis by their users or provided on private initiative.

In addition, to give port authorities greater flexibility in drawing up their competitive strategies, the same act provides for the possibility of introducing certain reductions in charges for ship, passage and freight rates, though it does underline (in the explanation of reasons) *“the need for the level of the rates to meet the objective of coordinating the transport system of general interest and comply with the principle of self-sufficiency for the port system, in such a way that each port’s ordinary costs are covered and sufficient profitability is assured for them to cover future investments and debt repayments.”*

In general, current legislation fosters competition between ports subject to the twin objectives of coordination and financial self-sufficiency of the Spanish port system. To do this it gives the Boards of Directors of each port authority complete freedom to set their own tariffs<sup>10</sup> and establishes a structure of charges (table 1) and reductions on these (table 2) which is common to all port authorities. The amounts of these depend on the profitability target set for the whole port system, which may be reviewed by the annual general state budget act and which is set in accordance with the limits laid down by law, limits which are derived from corrective coefficients established both to encourage ports’ competitiveness and at the same time to adjust their revenue to any variations in their infrastructure costs compared with the average for the whole system (Izquierdo & Vasallo, 2004). The reductions established must also comply with a series of six preset objectives stipulated in article 27 of law 48/2003.

**Table 1: Structure of charges laid down for all port authorities**

<b>a) For exclusive or special use of port space in the public domain</b>
Charge for exclusive use of port space in the public domain
Charge for special use of port facilities
Ship charge (art. 21)
Charge for special use of the public domain to undertake commercial, industrial and service activities
<b>b) For the provision of non-commercial services by port authorities</b>
Charge for general services
Charge for navigational aid service

<sup>10</sup> Charges are made for the provision of commercial services on a competitive basis, and their amount may never be less than the cost of the service (art. 7, law 48/2003).

**Table 2: Objectives linked to the establishment of reductions in charges**

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1. To build up and consolidate the role of Spain as a cruise and logistics platform at international level. In order to adapt Spanish ports to the conditions of international competition for maritime traffic at any given time.
2. To promote intermodality. In order to foster the integration of the ports in domestic and international logistic chains and build up community coastal traffic.
3. To help each port to build up and consolidate its traffic. Each port authority will make its own reductions to the net amount due in ship, passage and freight charges. The net amount is taken to mean the result of deducting the reductions provided for in this act from the full amount.
4. Due to circumstances of distance and position on an island.
5. To encourage environmental best practice.
6. To raise the quality of the services provided.

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Overall, while the act provides for the possibility of each port authority applying reductions to the charges it levies, the act itself restricts port managers' use of this option in drawing up their respective competitive strategies because:

- a) certain objectives refer to specific types of traffic (cruises) which not all ports have. Thus, the possible reductions are more concerned with objectives of the port system taken as a whole, and are of particular benefit to certain port authorities;
- b) there are limits to the application of the discounts provided for in the act, and State Ports must authorise them.

### **3. SURVEY OF THE DEGREE OF DISPARITIES BETWEEN PORTS**

The difficulty inherent in coordinating the actions of ports whose managers, as well as being decentralised, are supposed to compete with each other, is added to the diversity of the facilities which make up the Spanish port system. Spanish port authorities differ considerably from one another in terms of both their business turnover and the traffic in which they specialise. This makes it harder to establish a common regulatory framework which sets out to increase efficiency through competition and at the same time to safeguard the balanced development of the system as a whole.

#### **A) Descriptive Analysis**

One of the main features of the Spanish port system is its high degree of dispersion. There are currently 28 port authorities distributed around 8,000 kilometres of coastline which manage the 48 facilities shown in table 3<sup>11</sup>, which are connected to the country's most dynamic industrial and commercial centres by a network of land infrastructures. The deficiencies of this network favour the proliferation of small provincial ports, oriented largely towards meeting the maritime transport needs of their immediate geographical surroundings (Rus, 1995).

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<sup>11</sup> Taken from García Alonso *et al.* (2007).



**Table 3: Facilities by port authority**

<b>Port authority</b>	<b>Ports of <i>general state interest</i></b>
A Coruña	A Coruña
Alicante	Alicante
Almería	Almería and Carboneras
Avilés	Avilés
Bahía de Algeciras	Algeciras, La Línea, Tarifa
Bahía de Cádiz	Cádiz, La Cabezuela and Santa María
Baleares	Palma de Mallorca, Alcudia, Mahón, Ibiza and La Sabina
Barcelona	Barcelona
Bilbao	Bilbao
Cartagena	Cartagena
Castellón	Castellón
Ceuta	Ceuta
Ferrol-San Cibrao	Ferrol and San Cibrao
Gijón	El Musel
Huelva	Huelva
Las Palmas	Las Palmas, Salinetas, Arinaga, Arrecife and Puerto Rosario
Málaga	Málaga
Marín-Pontevedra	Marín
Melilla	Melilla
Motril	Motril
Pasajes	Pasajes
Santa Cruz de Tenerife	Santa Cruz de Tenerife, Los Cristianos, San Sebastián de la Gomera, Santa Cruz de la Palma and La Estaca
Santander	Santander
Sevilla	Sevilla
Tarragona	Tarragona
Valencia	Valencia, Gandía and Sagunto
Vigo	Vigo
Vilagarcía	Vilagarcía de Arousa

Table 4 reveals the considerable differences which exist between Spanish ports in terms of their importance to national maritime traffic. These differences mean that the 6 top ports accounted for 56% of all Spanish maritime traffic in 2005, the next 20 just 34% and the 12 smallest less than 10% of the total freight passing through the Spanish port system. Focusing on container traffic, which is the type of traffic which is on the rise and is at the centre of the process of competition between ports, shows that the concentration is even higher: just three ports account for 72% of the total (Bahía de Algeciras with 31%, Valencia with 23.2% and Barcelona with 17.5%) while the top five make up 87.8% of traffic, which means that the role in this traffic of the other ports considered to be of *general interest* is practically negligible.

**Table 4: Traffic figures for each port authority for 2005 (thousand tonnes)**

Port authority	Goods	% Total	% Liquid	% Dry	% General	Port I.	Containers	% Accumulated
Bahía de Algeciras	63.561	14,85	33,74	4,16	62,09	1,45	35.391	31,09
Barcelona	43.837	10,24	28,59	9,24	62,17	1,42	19.929	48,60
Valencia	40.862	9,55	3,38	15,57	81,06	2,40	26.406	71,79
Bilbao	33.237	7,77	59,23	12,82	27,96	1,53	5.468	76,60
Tarragona	30.987	7,24	57,79	38,41	3,80	2,03	81	76,67
Cartagena	26.768	6,25	77,88	18,98	3,14	2,48	390	77,01
Las Palmas	22.555	5,27	21,25	7,86	70,89	1,90	12.746	88,21
Gijón	21.542	5,03	6,58	91,15	2,27	4,17	64	88,26
Huelva	20.905	4,88	61,84	35,94	2,23	2,09	0	88,26
S. Cruz de Tenerife	18.725	4,38	51,04	10,10	38,85	1,11	3.625	91,45
A Coruña	13.985	3,27	61,02	31,72	7,26	1,78	0	91,45
Castellón	13.373	3,12	66,92	24,63	8,45	1,81	547	91,93
Baleares	13.027	3,04	15,59	17,79	66,61	1,59	1.410	93,17
Ferrol-San Ciprián	9.679	2,26	8,49	85,65	5,86	3,82	1	93,17
Almería-Motril	6.852	1,60	0,13	92,05	7,82	4,25	0	93,17
Santander	6.637	1,55	4,19	77,45	18,37	3,31	1	93,17
Bahía de Cádiz	5.702	1,33	1,89	44,84	53,26	1,99	1.152	94,18
Pasajes	5.360	1,25	0,00	61,21	38,78	2,30	0	94,18
Avilés	4.949	1,16	14,95	62,30	22,75	2,32	92	94,26
Sevilla	4.857	1,14	7,49	57,42	35,08	2,04	774	94,94
Málaga	4.665	1,09	1,63	45,02	53,34	2,01	2.077	96,77
Vigo	4.252	0,99	1,53	16,30	82,19	2,45	2.115	98,63
Alicante	3.491	0,82	4,35	47,78	47,89	1,89	1.099	99,59
Motril	2.762	0,65	47,79	45,15	7,06	1,90	0	99,59
Marín-Pontevedra	1.849	0,43	0,00	54,93	45,04	2,22	274	99,83
Ceuta	1.543	0,36	39,59	4,60	55,78	1,41	69	99,89
Villagarcía	1.184	0,28	30,91	48,81	20,27	1,41	0	99,89
Melilla	801	0,19	9,24	10,48	80,25	2,40	124	100,00
TOTAL	427.949		34,35	26,65	39,00		113.837	

Source: drawn up by the authors on the basis of information from public agency for state ports

It may therefore be asked whether a port model which aims to foster efficiency in maritime transport by stimulating competition between ports should not take these differences into consideration in laying down the guidelines for the competitive strategies to be followed by each port authority.

## **B) Statistical Analysis**

In order to appraise the significance of the diversity of the ports which make up the Spanish port system a cluster analysis of the statistics was performed. The results in terms of the volume of both freight and container traffic and, through both k-means and hierarchical analysis, reveal the existence of two broad groups of ports. The first includes Bahía de Algeciras, Barcelona and Valencia, and the second all the other facilities. Within the second group, k-means analysis in turn distinguishes between a

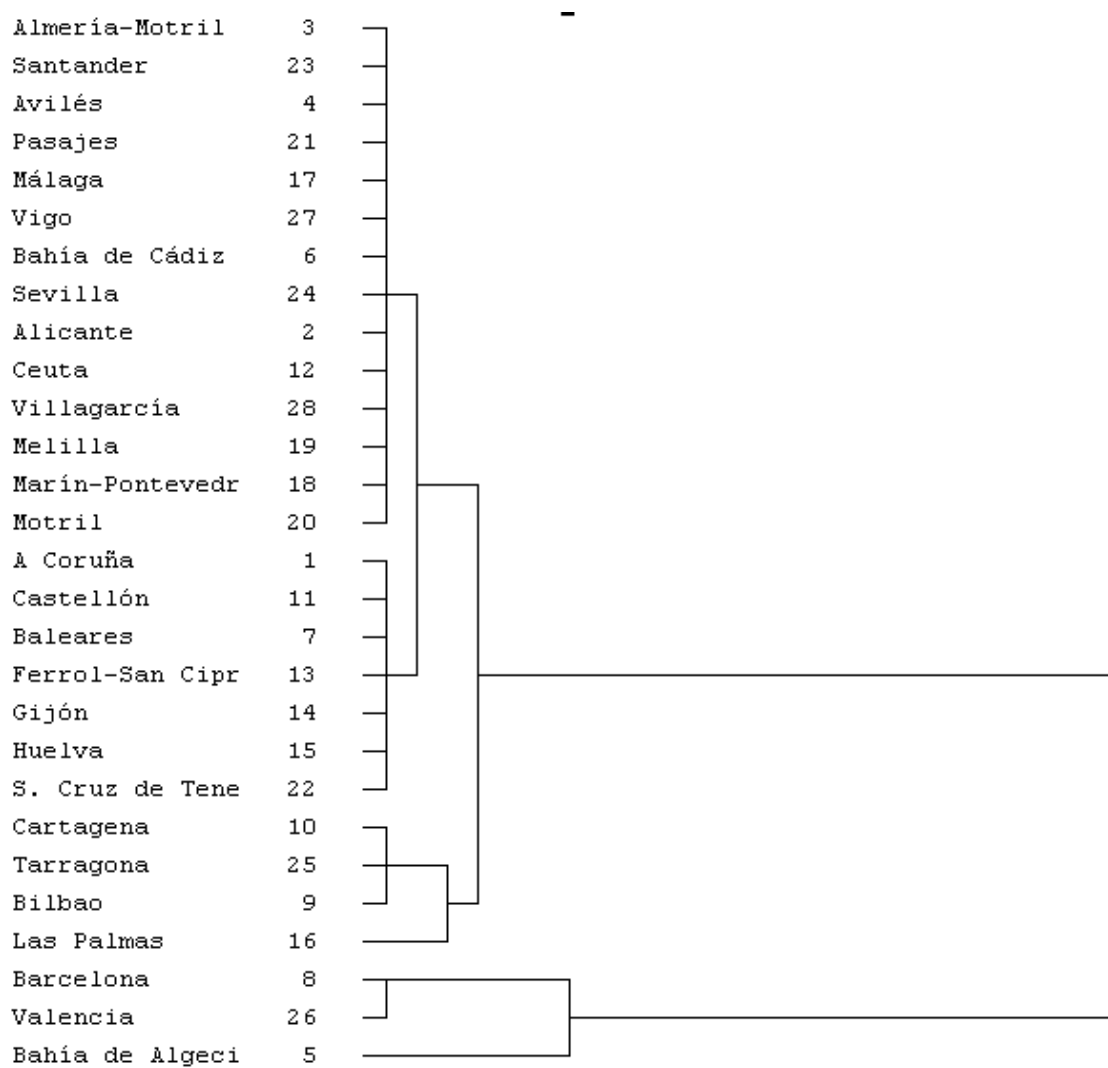
further two sub-groups: Las Palmas, Bilbao, Tarragona and Cartagena, and on the other hand all the other ports within the Spanish national system. These results are shown in detail below and illustrated by the dendrogram which follows.

**Table 5: Initial cluster centres**

	Cluster			
	1	2	3	4
Score: freight	1.00911	-.93069	3.10238	1.83488
Score: containers	-.45136	-.44649	3.54848	1.79698

**Table 6: ANOVA**

	Cluster		Error		F	Sig.
	Quadratic mean	gl	Quadratic mean	gl		
Score: freight	8 341	3	.082	24	101 240	.000
Score: containers	8 298	3	.088	24	94 533	.000



#### 4. FINAL CONSIDERATIONS

This paper points to the existence of two obstacles to fostering competition between ports in Spain and, consequently, to achieving improvements in the efficiency with which activities are undertaken in the sector. Both obstacles derive from the application of the regulatory model in place, which aims to coordinate two factors at once: i) the prices charged within each facility, and ii) the actions of widely differing port authorities.

The economic and service provision regime for ports of general interest act, law 48/2003, regulates *the economic and financial systems, those for the provision of services and use of the public domain in order to build up the competitive position of Spanish ports... by guaranteeing the principles of free competition between and within ports in accordance with the features of the traffic and the number and size of our ports*. To this end it establishes the following as the basis upon which to move forward in achieving this aim: building up the autonomy of ports subject to the principle of their financial self-sufficiency; but it also points out the need to set the charges levied within each port site in accordance with the goal of *coordinating the system of transport of general interest as established by the government and the principle of self-sufficiency in the port system*.

This is to say that the act provides for the possibility of introducing reductions in the charges levied at each port to increase its competitiveness; however, insofar as such reductions pursue preset objectives (four of them applicable to the freight charges), their amount is limited and their application requires authorisation from State Ports, the freedom of action of port authorities in drawing up their respective competitive strategies is limited.

It also has to be taken into account that the 5 most important ports in the Spanish system account for 50% of national traffic and 88% of container traffic. The disparity between ports which is reflected in this fact, together with the differences which also exist in terms of the relevant markets in each case, as well as individual ports' respective economic and financial circumstances, complicate the drawing up of regulations for a model aiming to achieve gains in efficiency on the basis of competition between ports, and combining autonomous regional interests with balanced development across the sector.

The unquestionable diversity of Spanish port authorities suggests that their competitive strategies must be different. It is therefore valid to ask whether it might also be appropriate to have different guidelines regulating their margin of action, or at least to grant them greater freedom of action in setting the charges they levy on their respective sites, while abiding by the principle of financial self-sufficiency.

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