

Measure 29: Port services liberalisation

First page

<p><i>Policy package:</i> 4A:Liberalisation and harmonisation</p>
<p><i>Measure 29:</i> Propose a common legal framework to improve and enhance access to the provision of port services market in the ports of the Member States open to general commercial traffic.</p>
<p><i>What is the problem being addressed ?</i> The measure is a key measure in realising the EU Internal Market in sea transport. In particular it aims to open up the markets in ports services (markets for cargo handling, passenger services) and improve transparency and accountability in port financing. At present port services are organized in a restricted and opaque manner by special businesses (often provided by port authorities themselves) which operate in a protected environment. Furthermore the funding and (tacit or explicit) subsidizing of activities in ports is thought to be a wide-spread phenomenon in the EU. As a result of the measure it is expected that the prices of port services will decrease and efficiency and the quality of port services will improve, the port users getting better value for money. By improving the efficiency of maritime transport and reducing turnaround time in ports through the improvement of port services access, the measure answers to requirements of the 6th Community Environment Action Programme (identifying and undertaking specific actions to promote a switch to more efficient and cleaner forms of transport including better organisation and logistics).</p>
<p><i>Measure's costs and/or benefits:</i> The main direct costs are the costs that port authorities and businesses in ports might incur because they will have to adapt to the new legislative framework. Such costs will generally depend on the size of ports and other port characteristics (nature of activities in ports). Estimates of these costs are not available, but they are thought to be minimal. Opponents of the liberalisation of port services fear that there are also indirect costs because of lower employment levels and a lower safety level in ports. There is at present no evidence that such indirect additional costs will be incurred, let alone be significant. The negative impact on safety levels is highly contested and, although labour productivity will improve, and employment per service decrease, increases in volumes of transport (because of lower prices) may compensate the initial negative employment impact.</p>
<p><i>Legislative implementation at the EU level:</i> The Commission made in 2001 a "Proposal for a Directive on Market Access to Port Services" (COM (2001)35) envisaging the necessary legislative framework. This proposal aimed to increase the efficiency and lower the costs of certain port services: pilotage, towing, mooring, services to passengers and cargo handling. The proposal has led to an extensive debate, both within the inter-institutional legislative process, but also with and between stakeholders. However, on 20 November 2003, after almost three years of inter-institutional legislative process, at the end of the Conciliation procedure, the European Parliament in Plenary Session rejected by 229 votes, 209 in favour and 16 abstentions the compromise text. An important "stumbling block" seemed to be the definition of "self-handling" (allowing some operations on vessels to be carried out by a vessel's crew instead of dock workers). Trade Unions feared a loss of jobs and also a possible decrease of safety levels in ports, and were able to convince many members of parliament. Indeed, the debate on "self-handling", in itself a minor part of the proposal, shifted attention away from the essence of the directive, which was about clear and transparent relations between port authorities and service providers. The Commission is now preparing a new proposal on access to port services with less ambitious goals, covering port services on the future motorways of the seas and envisaging the introduction of "self-handling" limited to cabotage sea transport.</p>
<p><i>What are the objectives ?</i> If the (rejected) proposal or a similar type of proposal were to be implemented the level of port service</p>

costs and prices would very likely decrease significantly. This is also acknowledged by opponents of the measure (in particular trade-unions and group of port workers) who fear that because of the more open market high-quality, competent port workers might be replaced by cheap, less qualified personnel. Amongst others it is maintained that this may lead to a higher risk of accidents in the ports (decrease of safety levels). However, it must be noted that the legislative text stressed that the proposed legislation would be completely neutral to the application of rules on social, employment, safety, environment issues, provided these were objectives, transparent, proportional and non-discriminatory.

Another important consequence regards port financing and charging: with the failure of the Port Services Directive, momentum in dealing with financial transparency and State aid has been temporarily lost. In order to achieve a level playing field in the port sector, the European Sea Ports Organisation (ESPO) has always advocated a step by step approach: flows of public funds, as well as their use, should first of all be made transparent. A new step would consist of providing clear guidance on public funding of port investments. A charging framework could be envisaged as a final stage provided it would not be theoretical and would not put ports in a disadvantageous competitive position compared with other nodal points and transport modes. According to ESPO (2003) “the current situation regarding transparency, State aid and charging therefore remains unclear as it was before and there is no indication yet of new initiatives the Commission may take in these areas.” Notwithstanding the block at EU level, Spain has recently liberalised the port services market. This positive move can be expected to benefit substantially Short Sea Shipping to/from Spain.

Interactions with other WP measures:

The measure will have a positive impact on efforts to increase the modal share of sea transport or modal shift from road to other, alternative modes of transport, like “motorways of the seas (28), Marco Polo (42), standardisation of transport units (43) . For their infrastructure and superstructure, ports continually have to adapt to the new developments in the shipping world. In particular in relation to Measure 43 which intends to put forward a new standardized European Intermodal Loading Unit (EILU), ESPO fears that the new EILU would lead to a discrepancy between intra-European and international standards and subsequent loss of efficiency in ports.

Second page:

Output indicators:

A basic output indicator, if the Directive was not rejected, should have been the “number of ports that have implemented new EU legislative framework and comply with the rules”. In the proposals there was a minimum size of freight flow throughput and passenger flow above which the measure is applicable. Smaller ports were exempted from this measure. The number of ports in Europe in 2002 and the number of those above 1 million tonnes of traffic are shown in the table below:

Table 1: Number of ports in Europe in 2002

COUNTRY	NUMBER OF PORTS	PORTS> 1MIO TONNES TRAFFIC
BE BELGIUM	7	4
BG BULGARIA	2	2
DE GERMANY	80	17
DK DENMARK	123	22
EE ESTONIA	5	5
ES SPAIN	27	26
FI FINLAND	55	21
FR FRANCE	56	20
GB UNITED KINGDOM	115	48
GR GREECE*	199	20
IE IRELAND	20	7
IT ITALY*	114	38
LT LITHUANIA	1	1
LV LATVIA	4	4
NL NETHERLANDS	48	10
PT PORTUGAL	13	6
RO ROMANIA	7	4
SE SWEDEN	107	28
SI SLOVENIA	2	2
TOTAL	985	285

* 2001 data

Source: Eurostat, unit D4 - Energy and transport statistics

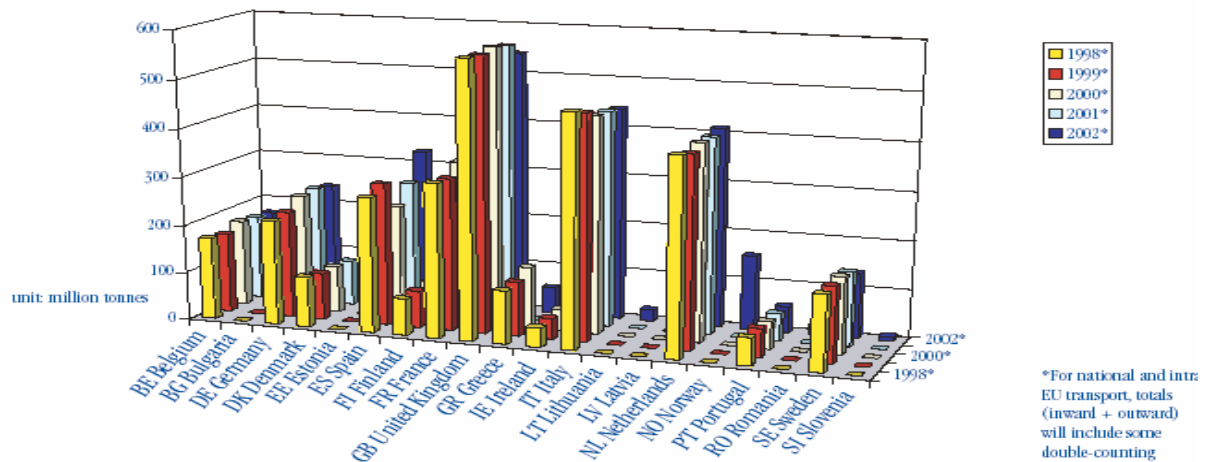
Outcome indicators: intermediate impacts on transport markets

The aim of port services liberalization proposal was to increasing their competitiveness, by reducing their costs and increasing their quality. Therefore, specific market indicators for this measure should include port activity related performance and productivity indicators. Changes of port services quality and prices shall be considered too.

Port Performance Indicator:

Port performance is usually measured in terms of tonnes that is transferred per unit of time (year/month/day), or the throughput. "Total cargo throughput of European ports" is shown in the figure below, which illustrate the leading role of UK ports, followed by Italy and the Netherlands.

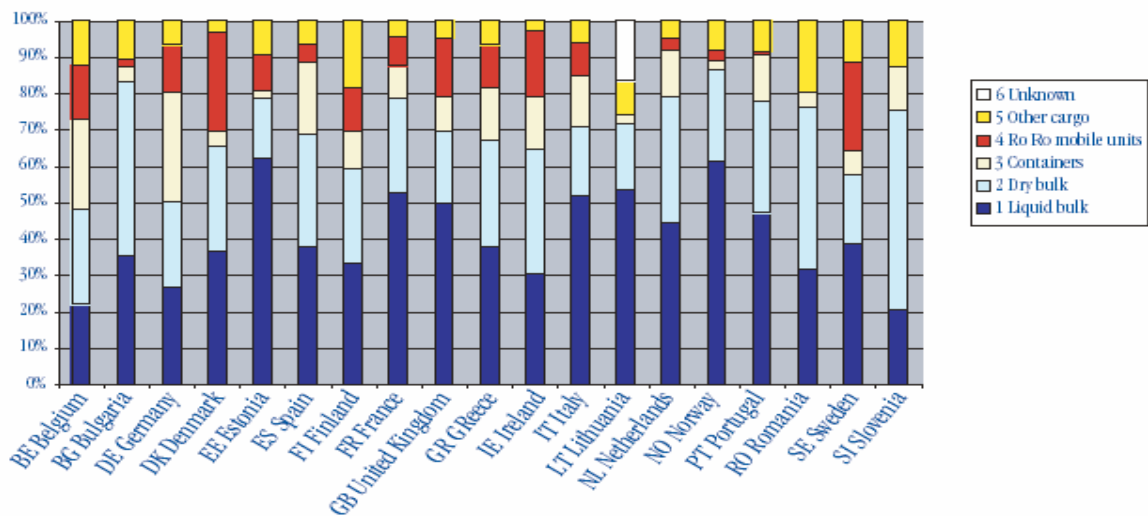
Total cargo throughput of European ports (per country)



Source: Eurostat, unit D4 - Energy and transport statistics

Besides technical efficiency, this indicator is also dependent on: i) scale of operation; ii) composition of cargo; iii) local geography (land use); iv) navigational challenges (e.g. problems with winter access). The composition of cargo in the main ports of European countries is shown below:

Share of types of cargo handled (inward and outward) in main ports in 2002



Source: Eurostat, unit D4 - Energy and transport statistics

Port Productivity Indicators

Historically there has always been a continual struggle among and within ports to increase throughput. Jansson and Shneerson (1982) conceive of the total port throughput as a function of

- expected capacity utilization of the berths (berth occupancy rate)
- number of berths (usually measured by means of the total quay length)
- expected throughput capacity per berth (berth capacity)

These can be considered key productivity indicators, although this category may include many other example of indicators, often related to single activities of the port chain (see Measure 28 – Motorways of the Sea). A review of these detailed productivity indicators is provided in SPECTRUM D3 (2004).

It is interesting to consider how could each of the above mentioned key productivity indicators be influenced to realise the aim of an increased throughput. In the short term an increased demand is usually met by an increased capacity utilization. There is of course a limit to this, in the sense that a 100% capacity utilization cannot be realized. Before it is ever realized it will lead to unacceptable waiting times. UNCTAD (1985) states that a berth occupancy rate of 75% is usually the optimal intermediary between investment costs and waiting costs. In the longer term a rising demand will be met by an expansion of capacity. This may be realized by increasing the number of berths, or by increasing the throughput per berth (i.e. the other two key productivity indicators). If one looks at the historical development of many ports, it becomes clear that such a development typically goes through a double process: i) a fairly long period of capacity expansion through an increase in the number of berths, followed by, ii) land shortage and therefore shift of emphasis to the improvement of berth capacity.

An example of such development (amongst many others) is given by the **port of Antwerp** (as illustrated in Van de Voorde 1995). Originally the port was situated right in the city (the old port). The expansion was carried through towards the north, until an obstacle halted that development (the Dutch border), and until the internal transport costs within the port also become high. When the port size did not allow any further expansion, the capacity was extended by increasing the number of berths within a given port size, by means of the so-called finger pier configuration. This was related to the fact that formerly the transfer from sea vessel to hinterland modes was done immediately, for instance from the ship straight on to the train wagon. But this development caused congestion problems on the land side. In addition, the continuous increasing of the ship size to exploit economies of scale in the sea transport meant a stronger growth for sea vessels than for hinterland modes. That is how transit-storage became necessary. As a result, the speeding of the handling operations has been boosted for sea ships as well as for inland transport: as these operations are independent of one another in the short run, rotation times have also been minimized. The use of storage as a buffer meant an important growth for the expected transfer capacity per berth. Yet there were still problems, for reasons such as the limited backup area for storage and transport. Indeed, there is a time – space productivity trade off at stake here: given the average time shipments are stored, the intake capacity of storage facilities has to be proportional to the throughput. The answer has been always in the direction of increasing the pressure to limit the transit time in a port, through the standardization and increased size of loading units by one side and the further mechanization of cranes and loading/unloading equipment by the other size. The logical result was containerization and the trends for larger units. The standardization of container sizes allowed for the productive use of expensive container cranes with a very large capacity. It is worth noting that simultaneously a number of other technological developments has led to an equally effective capacity improvement (e.g. roll-on/roll-off; bulk cargo handling). But this trend required again more space: compared to the traditional break-bulk berths, the need for back-up land is much bigger for container berths, for roll-on/roll-off berths etc. In fact the back-up land needed should at least be proportional to the size of the ship load, and it may be worthwhile examining – in addition to the key productivity indicators mentioned above – the amount of back-up land used per transferred tonne. Jansson and Sheerson (1982) gives the following estimations for the throughput for different types of cargo handling techniques and land requirements:

<i>Cargo-handling Technique</i>	Land per berth (hectares)	Throughput per berth per year	Throughput per hectare per year
Conventional break-bulk	1-2	100.000	75.000
Palletized cargo	3-4	200.000	60.000
Containers	7-10	500.000	60.000

Port Quality Indicators

Key quality indicators can include:

- Average time needed to transfer different types of cargo from step 1–ship mooring to step 7–departure of hinterland transport of the port production chain.
- Average delay per ship call.
- Proportion of ships delayed over a minimum time threshold

These indicators are influenced by a variety of factors, including physical capacity and productivity of the port equipment, administrative and Customs procedures, flexibility of labour, gate opening hours etc. Huang, *et al.* (2001), make use of queuing theory and simulation models to show how changes in port and ship characteristics cause changes in queues. For the queuing model, ship features include (i) *arrival rate*, (ii) ship cost at port per unit of time, (iii) cargo cost per unit of time, (iv) average *volume of ships at port*, and (v) average ship waiting time at port. (ii) and (iii) are assumed to influence waiting time only to the sense that they imply priority rules. (v) is assumed to be the output of the model.

Port prices and subsidies

The port authority's revenues stem from dues on vessels and dues on goods, each composed of various sub-elements. Dues on vessels have pilotage charges, towage charges, quay dues, breakwater charges, navigation light charges and sunk dredging charges as their main components, depending on the pricing structure actually applied. Dues on goods are sometimes based on the value of the goods, sometimes on their volume, and sometimes on their nature. Port authorities are also heavily subsidised by national or regional governments, but there is still a substantial lack of transparency with regard to the composition and level of these subsidies. In any event, port liberalisation is expected to increase competitiveness and efficiency of ports, and this should be reflected in a more transparent determination of port charges and subsidies, and a reduction of both (especially of government subsidies in the first phase of liberalisation, that could be compensated in the short term by some increase in the port charges).

Outcome indicators: final impacts on transport users and non users

There is some concern about the level of safety at ports, that according to those against liberalization will deteriorate, so it is important to monitor the number of accidents – and in particular those involving port workers – in the port area.

Another concern regards the potential conflict between port expansion, which will be needed to accommodate the growing demand in maritime transport, and environmental protection. Despite the heavy investments made by ports to optimize their environmental performance, such developments remain very much constrained by the rigid application of EU environmental regulations. The report of the High Level Group on the Trans-European Transport Networks noted that the existence of environmental constraints constitutes one of the most important reasons for delays encountered by existing TEN-T priority projects. In particular, the Water Framework Directive is likely to raise similar concerns as the Birds and Habitats Directives. Impacts on ports of this piece of legislation may be far-reaching, as it may constrain both existing activities and future developments. In relation to this, it is worthwhile to continue to collect data and update the indicator "uptake of land from port infrastructure" (TERM indicator).

Finally, there is a concern that port liberalization will increase social tensions with the current strongly unionized port workers. This can be monitored through the number of strike days per year in the European ports.