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PRODUCER PRICE INDEX FOR SERVICES

MINI-PRESENTATION

Producer price index for sea freight transport

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Preliminary note

Since the end of the 70s the Federal Statistical Office of Germany has computed monthly price indices of sea freight transport. The conceptual basis of these indices has not undergone fundamental changes since then.

Function and purpose

The function of the indices of sea freight rates is to measure the development of the prices of maritime goods transport services from the viewpoint of the German national economy. The indices of sea freight rates are price indices for service imports and exports. They complement the indices of foreign trade prices, which refer to imports and exports of goods only.

The development of freight rates is important for all suppliers of goods transport services and for internationally operating businesses in which transport services represent a cost factor. The indices are therefore often used as a reference in specifying stable value clauses. They also serve to deflate the sea freight revenues as part of national accounting.

Index of freight rates in liner trades

Present coverage

The index of freight rates in liner trades is to show the development of prices of maritime transport services in the area of liner trades which German enterprises enlist for their imports and exports. The index covers freight rates for world-wide maritime goods transport services from and to the largest German sea ports.

Index concept

The Index computation is based on the Laspeyres concept. The present computation is based on the year 1995 but it is intended to rebase on the year 2000 soon. The methodology of a revised computation will not significantly change.

Definitions and delimitations

- The freight rates are collected monthly with a representative sample of shipping companies, ship brokers, and agencies. Currently, 20 reporting units are asked to indicate the freight rates for important goods traded by sea for a representative selection of traffic relations.
- The reporting units are selected by sampling. The decisive criterion for selection is that the reporting unit regularly performs representative maritime transports that are suitable for rate monitoring.
- The reporting units supply basic rates (agreed rates, competition rates, and "open" rates), currency adjustment factors and surcharges (e.g. surcharges for bunker oil and port charges), which are taken as a basis for concluding freight contracts.
- From these data, (gross) freight rates are calculated for the reference month for each type of goods with regard to a specific traffic relation on a pier/pier basis. Price reductions that are limited in time (e.g. "dumping rebates") are deducted. The objective is to cover the effective rate.
- Where intermodal rates are applied in multimodal house/house transport via sea, only the proportional freight rate for mere maritime transport is included in the index calculation.
- The freight rates are collected in the original currency and converted to EURO.

Basis and method of computation

- The computation took into account the increasing share of container traffic in maritime transport.
- A definite allocation of container freight in terms of product classification is not always possible.
- The index structure mainly focuses on traffic relations. It distinguishes between different types of goods at the second level only.
- The types of packaging and loading are considered in determining the freight rates.

Deriving the weights

A figure required for weighting is the total value of liner freights in maritime transports involving German Sea ports.

This figure is not available. It is therefore necessary to perform makeshift calculations. For this purpose, basic data are obtained from the statistics of maritime transport which include data on the quantities of goods transshipped in German sea ports as part of liner trades in the base year (1995 or, for a revised computation, base year 2000).

This data material, which shows a detailed breakdown by traffic relations and product groups in accordance with the classifications used for transport statistics, first has to be grouped by major traffic relations and product groups for the purpose of price statistics.

For the index computation a total of 117 traffic relations were selected. On the whole, about 80 different types of goods were available. As a result, 672 index positions were formed.

For each of these positions, an annual average freight rate had to be calculated as the arithmetic mean of the monthly average rates in the base year in order to obtain freight values by multiplying the quantity of goods by the corresponding average freight rate of the base year.

Those freight rates of the base year which refer to container rates had to be recalculated to obtain freight rates per tonne. The computation of the correction factors required for each type of goods took into consideration, on the one hand, the specific weight and the dimensions of the products transported and, on the other, the carrying capacity and the dimensions of the different types of containers. And finally, experts of shipping companies supplied the information which was necessary to estimate the degree of container capacity utilisation.

The freight values estimated in the aforementioned way were used to derive weighting factors on the new base. The new weighting structure is shown in a concise form in table 1 below.

Presentation of results

Table 1: Index of freight rates in liner trades

Weight shares and number of rate series

Category of commodities	Weight shares	Rate series
	%	number
Overall index.....	1 000	672
Homeward-bound liner trades	485.19	285
Outward-bound liner trades	514.81	387
Europe.....	126.83	117
Africa.....	69.31	62
America.....	357.71	235
Asia/Australia.....	446.15	258

The index breakdown is divided into homeward-bound and outward-bound trades. In combination with this breakdown a regional breakdown of the results by the four traffic relations of Europe, Africa, America, and Asia/Australia is available.

Table 2: Index of freight rates in liner trades

Results

1995=100

Year (average)	Liner trades, total	Homeward-bound trades	Outward-bound trades	Europe	Africa	America	Asia / Australia
Month							
1996	96.8	94.4	99.0	99.2	97.8	100.4	93.0
1997	98.9	95.4	102.3	99.8	97.9	106.3	92.9
1998	89.5	89.0	89.8	94.9	96.2	102.3	76.5
1999	86.3	94.8	78,3	91,4	94,3	98,0	74,2
2000	117,2	114,9	119,5	95,9	134,5	129,8	110,5
2001	113,9	106,9	121,0	97,7	141,6	136,3	96,2
2002	95,0	84,0	105,3	94,7	128,6	109,9	77,9
2003							
June	100,5	89,9	110,5	94,7	113,2	108,5	93,7
July	102,6	97,4	107,4	94,6	114,5	112,8	94,8