

Appendix II: Sources concerning freight rates

In order to establish the price of transport we heavily relied on one kind of source which is found in massive numbers in the Amsterdam notarial archives: chartering contracts. A chartering contract is an agreement between a shipping company and one or more freighters or charterers who charter the ship for a particular voyage or, less often, for a specified period like a month. The freighter chartered the whole or part of the ship to carry a cargo from port A to port B at a certain price. The contracts contain the name of the shipmaster who was acting in the name of the shipping company, his residence, the name of the charterer (s), the name of the ship, the freight charge and often but not always the tonnage of the ship and the kind of cargo and its quantity or weight. The chartering contracts are also called charter-parties or freight contracts. In Amsterdam lots of chartering contracts were notarized, which means that a signed copy was entered in notarial registers. An unknown number of them were not (Van Tielhof 2002:199; Knoppers 1976: 17-18; Van Royen 1996: 108). It is important to stress that these prices were the prices actually agreed upon for a specified transport service.

The market for freights in Amsterdam must have expanded considerably in the course of the 16th century, along with the expansion of overseas trade and shipping. In the 15th century chartering contracts were probably still concluded on the first of the two big fairs, where foreign merchants appeared to look for possibilities to ship their goods (Posthumus 1953: 130). At the end of the 16th century chartering contracts were signed all year round. Jan Franssen Bruyningh started to work as a notary public in Amsterdam in October 1593, and had a large clientele of merchants and ship-owners from the start. Every year, about hundred freight contracts referring to voyages to the Baltic are documented in his protocols. Bruyningh also witnessed huge numbers of charter parties referring to other trade routes, such as Spain and Portugal for which about 50 contracts remain in his protocols each year.¹ It is highly probable that Bruyningh did not build his practice up from nothing but that he continued the flourishing practice of a predecessor. This can very well have been notary public Frans Anthonisz Bruyningh, who had a big practice in Amsterdam from 1579 to 1591 (IJerman 1931: 164). This notary's archives unfortunately have been lost, which prevents us from studying the influence of the massive immigration of Antwerp merchants on the Amsterdam freight market after the fall of Antwerp in 1585. The wealth of contracts remaining since October 1593 at least shows that a fully developed market for freights existed by then.

The massive character of the freight market had several consequences. For a start it moderated price fluctuations. Freight charges in Gdansk in the 1580s, mentioned in mercantile correspondence, show intense price volatility unknown in Holland (Van Tielhof 2002: 209-210). Transport was probably also relatively cheap in Holland, thanks to the volume of shipping services. It was about as expensive to charter a ship for a single voyage from Gdansk or from Bordeaux to Holland as to charter a ship for a return voyage to these destinations starting in Holland, although the latter trip would take twice as much time. Lastly, conditions on the freight market in Amsterdam served as a guideline for other port cities. 18th-century mercantile correspondence shows that

¹ All freight contracts having the Baltic as destination have been published by Winkelman (1977/83) II-VI; an overview in vol. VI, 831-832. IJerman published more than 1000 contracts for voyages to Spain and Portugal in the period 1593-1602, or about 100 a year. About half of them are multilateral voyages overlapping with Baltic voyages (IJerman 1931: 164, 286-287).

information about ships chartered in Amsterdam heavily influenced the price formation process of freights in Bordeaux (Wegener Sleeswijk 2006: 361).

Objections have been raised against the charter-parties saying that they are not representative for Dutch trade and shipping in general. Christensen signalled in his fundamental study on Dutch Baltic trade that only for a small part of all voyages a notarial contract had been concluded. To make things worse, this part varied according to the trade route and the ship's carrying capacity. For simple, routine return voyages to the Baltic much less contracts were found than for multilateral trips via western Europe to the Baltic or vice versa. In general, contracts were more likely made for longer trade routes than for shorter ones, and more often for big ships than for small ones.² Although shipping between the Dutch Republic and north-western Germany and the British isles was intense, chartering contracts for these routes are very rarely found.³ Quite different is the situation in regard to the White Sea. Numerous chartering contracts remain for trips to Archangel for the whole of the 17th and 18th centuries. An important explanation for the discrepancy between the number of contracts and total shipping from Amsterdam is the entanglement of trade and shipping in Holland (Lesger 2004). Many shipping companies traded on their own account, especially on certain trade routes and the timber trade to Norway can serve here as an example. Trade was usually in the hands of the ship-owners and only a relatively small part of the ships was chartered (Boon 1996: 58; Hart 1997: 121; Lesger 2001: 63). On the other hand, at most a third or a quarter of the ships sailing to the White Sea is thought to have been laden with goods owned by the shipping companies while the rest of them, the majority, was chartered (Hart 1973: 105, Footnote 8). The selection of freighters appearing in the contracts needs some qualification too. Foreign charterers appear relatively often as they are less likely to own (parts of) ships they can use. The mass of Dutchmen owning ships or parts of them felt less need to sign a contract and notarize it. Fortunately, all these objections against the chartering contracts are not relevant for our purpose. We are interested in transport prices and we can assume that the price agreed upon accurately reflects market conditions on the moment the contract was concluded.

Another concern in this respect is the presence of (sometimes hugely) varying price differences within one single year. This could be the result of special circumstances, as the beginning or end of a war, which tended to reduce or drive up freight rates. At the end of the shipping season, in autumn, prices tended to go up to account for the bigger risks of having to deal with bad weather. Moreover, it is undisputed that shipmasters enjoying a good reputation were able to negotiate better rates than others (Van Tielhof 2002: 212). As it is our main objective to trace the long term development of the efficiency of Dutch shipping, we would like to have prices reflecting the average price paid in a particular year, and prevent that prices resulting from specific personal, climatic or political circumstances gain too much weight. We therefore choose to concentrate mostly on trade routes for which many contracts are available to reassure that the rule of large numbers applies. The availability of rates, largely thanks to previous work of different scholars, therefore became an important condition for the selection of the routes.

² Christensen 1941: 102, 284. Christensen estimates that for only 10-30% of all the voyages to the Baltic a notarial contract was made, 281-182.

³ Van Royen (1996: 114) collected all freight contracts in the period 1700-1710 but found only very few for these routes.

The largest number of freight rates at our disposal apply to shipping from Amsterdam to Archangel. Hart published freight rates based on 631 prices for return voyages in the period 1594-1645, which is an average of more than 12 per year (Hart 1973: 8, 11-12). For the second half of the 17th century he was not able to find as many prices, only 148, which is less than 3 per year. This series could be continued thanks to a publication by Van Royen of Dutch freight rates on all the important trade routes in the period 1700 – 1710 (Van Royen 1996: 124). His yearly averages for shipping to Archangel are based on 395 separate prices, or an impressive 36 per year. For the present article we have collected 618 chartering contracts in the Amsterdam notarial records for return voyages to Archangel in the period 1714-1794, which is almost 8 prices per year. In total, 1792 freight rates.

The Baltic trade is also well documented, as can be expected in view of the importance it always had in the Dutch trading network. Despite the phenomenon of contracts which were not notarized, especially in the 18th century, and the entanglement of shipping and trade reducing the number of ships actually chartered, our series are based on more than 500 separate prices. Van Tielhof published freight rates for single voyages from Reval (Tallinn) to Amsterdam (1513, 1514, 1516, 1530, 1547); 45 prices for single voyages from Gdansk to Holland (1578-1595) and a series for return voyages from the Dutch Republic to Gdansk and nearby ports based on 482 individual prices (1591-1758) (Van Tielhof 2002: 198, 203, 340-345). We collected another 16 prices in the Amsterdam notarial records for the period after 1758, and took freight rates for return voyages to Gdansk or Königsberg in 1753 and 1759 from an article by 't Hart and Van Royen (1984: 100).

A third trade route which is sufficiently documented is shipping to Bordeaux. Israel published series of freight rates for several trade routes in the first half of the 17th century, among which figure 34 prices for transporting wine from Bordeaux to Amsterdam (1594-1643) (Israel 1989: 90, 135). For the 18th century we were able to make use of the data generously given to us by Anne Wegener Sleeswijk. She collected freight rates for transport from Bordeaux or Libourne - also in Guynenne - to Amsterdam or Rotterdam in 1698-1793, and calculated yearly averages based on 361 individual prices (discussed in Wegener Sleeswijk 2006). Unfortunately a gap is left between the two series, spanning the second half of the 17th century.

In order to include shipping to the Mediterranean in our survey we fell back on the transport prices Hart presented in his study on the Archangel trade, as he also considered shipping from Amsterdam via the White Sea to Italy. There were never many ships involved in this multilateral trade, but it was a constant part of Dutch shipping in the 17th and 18th century. We used his 40 prices for the destination Livorno in the period 1601-1699 (on this route the freight rates usually did not involve the voyage back to Amsterdam) (Hart 1973: 17-18), and collected an additional 19 freight rates in the Amsterdam notarial records for 1712-1790. For the first decade of the 18th century rates were again provided by Van Royen who based his averages on 36 prices. The data on this route are few, but they cover a relatively large part of the trade on this route.

In all, more than 2800 prices, and although this number covers only a small part of all the voyages undertaken by Dutch ships in the period under study, it should be sufficient to overrule all kinds of particularities and give a trustworthy picture of the development of transport prices on Dutch ships.

Practically all of these prices come from chartering contracts in archives of notaries based in Amsterdam. As a consequence our data are scarce before circa 1590, when there is a lack of notarial archives. Another problematic period is the second half of the 18th century. After the middle of the century the number of notarial contracts for voyages to the Baltic and the Atlantic coast of France diminished. As Wegener Sleeswijk has suggested there is reason to think that in this period the need to notarize the contracts was felt less than before. Freight contracts were thus still made, but more often by private contract (Wegener Sleeswijk 2006: appendix VII). To supplement the data from the notarial registers, the Amsterdam price current is useless because it unfortunately did not mention freight rates. To a limited extent, especially for the 16th century, we were able to collect freight rates from mercantile account books, but it is surprising how few private archives of Dutch merchants have remained. Only a very limited number of the thousands of prices have been taken from mercantile account books.⁴

A final consideration about the freight contracts as a source concerns their homogenous character. Almost all of the prices were expressed in guilders per last.⁵ These lasts were often specified as rye lasts, which is explained by the dominance of grain on these trade routes. When no specification was added, we have interpreted lasts as rye lasts. In some contracts there were only prices for other commodities. We then used the prices for wheat or barley, and if they also lacked, the price for linseed or hemp. These were not much different from the rye last, as is apparent in those cases where the same tariff is explicitly mentioned for all grains, or cases where transport of wheat costs one guilder per last more and barley one guilder less than transport of rye (Hart 1973: 9). Prices per last of tar and timber were always neglected as the tar and timber last differ too much from the rye last. In the 18th century an official ship's last came into use in Holland, specifically meant to indicate the carrying capacity of ships irrespective of the goods loaded. These ship's lasts were considerably bigger than, for example, rye lasts or timber lasts. Probably the ship's lasts were expressed in specific gravity of water (Wegener Sleeswijk 2003: 89). These ship's lasts were used in the collection of certain duties in the port of Amsterdam in the 18th century and in other circumstances, but charterers and shipping companies did not change their habit of expressing transport prices per last of rye. Prices for shipping between Guyenne and the Dutch Republic were always expressed per ton of wine. To facilitate the comparison with other routes, we have converted them to rye last by equalling 1 rye last to 2 tons of wine. Our nominal prices thus all give prices per rye last.

We have neglected the particular conditions and arrangements made in the contracts, such as the maximum of lay-days, the right for the crew to take some goods with them at no charge (*'voering'*, *'Kinderführung'*) and the hat-money or special reward for the shipmaster personally (*'kaplaken'*).⁶ Often the value of these extra remunerations was not known or it was impossible to

⁴ The prices for the first half of the 16th century are from the account books of a Reval merchant, but refer to the freight for Dutch ships. Prices for 1578-1595 are from the private archives of a Delft merchant.

⁵ In the first half of the 18th century the prices for shipping to Livorno via Archangel were expressed in ducats, which have been converted into guilders (1 ducat = 3 guilders).

⁶ Only in the case of the freight rates to Bordeaux in the 18th century the hat-money was added to the freight price as far as possible. Wegener Sleeswijk 2006: Appendix VII.

convert them to prices per last. In any case, their relevance to the transport costs in general was limited, and there was no tendency for them to diminish or grow larger in the long run.⁷

Prices used for deflating the freight rates:

Wages: wages on unskilled labourers from De Vries and Van der Woude (1997)

Victuals: index of the cost of living from Van Zanden (2005)

Iron and Copper: Posthumus (1943/64) (17th and 18th century: Amsterdam exchange; 15th and 16th century: Utrecht and Leiden institutions), De Moor (2000), and for the period 1585-1620 De Jong (2005); a few gaps remained, which were filled by simple intrapolation.

Timber: same sources as iron and copper prices: Posthumus (1964): series 216, 268, 316, 317, 318, 328, Middelhoven (1978), and De Moor (2000); we thank Christiaan van Bochove for making these data available to us; we also had to intrapolate gaps in this series.

Zuiderduijn (2007) (period 1450-1560) en from the development of interest rates on public debt by Fritschy (2004).

⁷ This is the impression conveyed by the contracts for rye shipments from Gdansk to Amsterdam and it was also remarked by Knoppers in relation to the hat-money for voyages to Archangel (Knoppers 1976: 45, Footnote 107).

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