Decay or defeat ? : an inquiry into the Portuguese decline in Asia 1580-1645

Veen, Ernst van

CHAPTER III

THE CARREIRA DA ÍNDIA

Ships and navigation

Their knowledge of shipbuilding and navigation enabled the Iberians to overcome the existing natural barriers and to 'discover' new worlds. However, once they had chosen the places where their *Estados* could collect the revenues and from where they would maintain regular communication with the mother country, they were confronted with serious limitations. In particular the Portuguese *Carreira da Índia*, the shipping route between Lisbon and India, suffered from wear and tear and the technical limitations of its ships in the sometimes hostile environments of the Atlantic and Indian Oceans.

The Portuguese, at least those living along the coast and the estuaries, had, so to say, shipbuilding, sailing and navigation in their bones. For hundreds of years they had built ships which were suitable for fishing and navigation in the coastal waters of the Atlantic Ocean and in the North Sea. Already in 1258 an inquiry into how the population in Pindelo, a village in the mouth of the river Ave, paid the royal rights, revealed a surprising variety of different types of ships that were being used for fishing and for the import of merchandise.[i] Some of these types still existed in the sixteenth and seventeenth centuries, of larger tonnage and somewhat modified, but with the same limitations.

One of the antique types was the *barca* of about 50 tons, which had one mast with a square sail and could only navigate running with the wind. It was used in the 15th century along the Northwest African coast and in order to get back home one had to sail westward towards the Azores to catch the southwesterly wind. The *navio redondo* had similar rigging, with more masts, but also with square sails and was used in the traffic with Asia. It could only tack at 80-90 degrees and was therefore very much dependent on the wind direction. It was this type of ship that in the course of time was upscaled to the large *carraca*[1] of 1,000 and even 2,000 tons, but that still suffered from the same navigation problems. The *caravela*, with 2-3 masts and lateen sails, could manage 55-65 degrees close to the wind, was therefore the fastest and most versatile craft of all, but was limited in size and frequently used as a reconnaissance or messenger ship.[2] The word *galeão* was a generic name for warships. They could have two masts with square sails and a mizzenmast carrying a lateen sail or be very similar to the *nau* with square sails only. It could vary between 100-1000 tons and its sailability would largely depend on its type of rigging. Apart from their limited ability to sail close to the wind, going about presented for all these ships a major operation, asking the utmost from the skills of the officers and crews.[3] In those times, the art of navigation was largely a matter of 'how not to go where the wind carries you'.

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[1] *Carraca* was originally an Italian name, adopted by the Portuguese, who used it as a synonym for the word *nau*.

[2] Quirino da Fonseca, *Os navios do Infante D. Henrique* (Lisbon 1958) 59-61, 74-75.

[3] John Harland, *An account of the shiphandling of the sailing man-of-war 1600-1800, based on contemporary sources* (London 1984) 183.

As a starting point for the sailing routes to Africa, Asia and Brazil, Portugal is favoured with the wind directions and currents on the Atlantic Ocean, which remain fairly constant throughout the year. They allow a relatively easy passage along the African West Coast towards the Canary Islands, which can hardly be missed, and to Sierra Leone. From there the return voyage back to the North has to be made via the Azores. Continuation of the voyage along the African coast towards La Mina and the return from there are also relatively easy. However, from the islands of São Tomé and Príncipe further to the South, along the coast, it is a time consuming affair, because of the counter current and the persistent southerly wind direction.

Bartolomeus Días and his predecessors showed that caravels were the one and only solution to this problem. As a consequence, the freighting capability in this direction was quite limited. For the heavy freighters, the ships with the square sails, the route for the first time chosen by the pilots of Vasco da Gama, along the coast of Brazil towards the Abrolhos and from there to Cape of Good Hope, was the preferred one.

The monsoons

The Indian Ocean was an entirely different kind of environment. The routes to be followed were dependent on the monsoons and therefore on the time of the year. Arriving at Goa or leaving against the prevalent monsoon was virtually impossible.

In view of the April storms along the Portuguese coast the preferred time for the departure from Lisbon was the second half of March until the first ten days of April.

An earlier departure made little sense because it meant that one had to wait in Mozambique for the southwest monsoon. This sometimes began in May, but it often became only really strong enough in July.

A late departure from Lisbon, between May and December, also resulted in an extension of the voyage. Because of increasingly strong counter currents, the 20th of July was the ultimate target date for using the Mozambique Channel and to sail from there along the East African coast and to cross the Indian ocean over the shortest possible distance to arrive safely in Goa. After this date the voyage would take longer and would be more risky: around the island of Madagascar, crossing the ocean towards the North (see fig. 3.1). The golden rule was therefore to pass the Cape of Good Hope in early July.[4]

Ships that were delayed by bad weather on the Atlantic or by lack of experience of the pilot had the choice between returning to Lisbon or wintering in Mozambique. In the first case one spoke euphemistically of ships that were *arribadas*, in the second case they were called *invernadas*. Statistically, 88 per cent of the voyages took between 4.5 and 7 months. A part of the ships arrived in India in the second half of August, most of them in the first half of September and some of them in the second half of September or even the end of October.

The return voyage from Goa or Cochin began preferably before mid January. In particular for ships leaving from Cochin, 15 January

[4]Vitórino Magalhães Godinho, *Os descobrimentos e a economia mundial* (Lisbon 1991) III, 43-48.

was the critical date. Of the ships leaving before that date 87 per cent arrived safely in Lisbon and of the ships leaving between 16 and 23 January 81 per cent, but of the ships leaving after 24 January only 67 per cent.[5] The captains of the ships that left too late could either seek safety as an *arribada* or *invernada* or run the risk of being wrecked against the coast of Madagascar or Southeast Africa. Wintering in India was often the preferred choice, because it allowed the crew to engage in their own private business.

With hindsight, Goa was the worst place the Portuguese could possibly have chosen as the endpoint of the *Carreira da Índia*. The limited time spans in which Goa could be reached or left and the fear to get in the wrong monsoon was to become one of the major causes of the many losses on the outward and return voyage. In the late sixteenth century and in the 1620s proposals were made to move the capital of the *Estado da Índia* from Goa to Ceylon,[6] but this would hardly have improved the sailing conditions.[7]

Sailing statistics

A numerical analysis of the *Carreira da Índia* on the basis of shipping data is hampered by the fact that a part of the archives has been destroyed during the Lisbon earthquake of 1755. Recently a number of Portuguese authors have published their analysis and compilation of original sources and Portuguese literature.[8] However, until now Duncan appears to have provided the most complete estimates of the number of ships, tonnages and people transported.[9] His figures are

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[5]T. Bentley Duncan, 'Navigation between Portugal and Asia in the sixteenth and seventeenth centuries' in E.J. Kley and C.K. Pullapilly (eds.) *Asia and the West. Encounters and exchanges from the age of explorations* (Notre Dame, Indiana 1986) 14.

[6]A.R.Disney, *Twilight of the pepper empire. Portuguese trade in Southwest India in the early seventeenth century* (Cambridge Mass./London 1978) 122, C.R. Boxer, 'Portuguese and Spanish projects for the conquest of Southeast Asia 1580-1600' in *Journal of Asian History* 3 (1969) 125.

[7]For an extensive discussion of winds and currents see A.J.R. Russell-Wood, *The Portuguese Empire, 1415-1808. A world on the move* (Baltimore/London 1998) 32-38.

[8]António Lopes, Eduardo Frutuoso, Paulo Guinote, 'O movimento da Carreira da Índia nos secs.XVI-XVIII. Revisão e propostas' in *Mare Liberum* 4 (1992) 187-265 use the following formulas for each individual year: departures Lisbon minus *arribadas* minus losses = arrivals India for the outward bound voyage and departures India minus losses = arrivals Lisbon. They do not allow for ships arriving in a following calender year, for the *invernadas* and for the *arribadas* on the return voyage. However, they allow for ships retained in Asia. João Paulo Aparício, Paulo Pelúcia Aparício, 'As relações das armadas e a Carreira da Índia: contribuições para uma análise crítica' in *Proceedings of the IX International Reunion for the History of Nautical Science and Hydrography* (Cascais 2000) 527-554 use the formulas: departures Lisbon minus losses = arrivals India = departures India and departures India minus losses = arrivals Lisbon and that for each year. They do not allow for ships arriving in the next calender year, for *invernadas* or *arribadas* or for ships retained in Asia. Both approaches lead to errors, in particular the second one. The results of *Lopes* 1992: 227-228 are closest to those of Duncan, especially with regard to the number of arrivals in Goa and back into Lisbon and basically tell the same story.

[9]*Duncan* 1986: 3-25. Magalhães Godinho has, for the years 1500-1635, also calculated the number of *arribadas* and *invernadas* (*Magalhães Godinho* 1991: Vol.III 49). A problem with Duncan's data is that his number of departures includes the *arribadas*, whereas

based on the inter- and extrapolation of known incomplete data. In his own words, they have to be used with care and it is hardly possible to draw any more conclusions from his work than has been done so far.[10] However, his data can certainly be used to illustrate the ups and downs of the *Carreira da Índia*. For this purpose his data for the period 1571 to 1670, which are given in appendix 3.1 a, b and c and presented in figure 3.2 a, b, c, and d, will be discussed hereunder.

Between 1571 and 1590 the numbers and volume of the ships leaving Lisbon increased, notwithstanding continuing difficulties in getting contractors together who were willing and able to invest sufficient capital.[11]

The 1580s were the decade where one would expect a major impact of the Castilian war effort on the Portuguese shipbuilding and overseas trade, especially after October 1585, when Drake had landed in Galicia and Philip took the firm decision to invade England, and gave orders to form the *Armada*.[12] And indeed, besides the Portuguese fleet of ten fighting galleons which the Castilians could have at their disposal since 1580, an additional six were built during the years 1583-1586 for the 'defence of Portugal', whereas in 1587 Philip ordered a crash program for cannon founding in Lisbon.[13]

Nevertheless, in the years 1586-1590 seven new carracks were put into service on the *Carreira da Índia*[14] and during the 1580s more tonnage left and arrived than in any previous decade. In the words of Duncan: 'the 1580s were the *Carreira*'s best years'.[15] This notwithstanding, the shipping losses on the outward and return voyages were higher than one had seen them in the previous twenty years. At the same time, the great carracks with their lower cost per ton of freight, were becoming predominant and on average the ships were about 10 per cent bigger than in the previous decade.[16]

During the 1590s the number of departures from Lisbon amounted

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of course, in actual fact they did not leave but returned, to leave again, if they could, at the next opportunity. His tonnages apply to the total number of departures, his number of heads only to successful departures.

[10] Both Sanjay Subrahmanyam and Om Prakash have limited themselves to quoting Duncan's numbers and tonnages of the ships leaving Lisbon and India. [Sanjay Subrahmanyam, *The Portuguese empire in Asia 1500-1700. A political and economic history* (London/New York 1993) 61, 86, 142, 163, 183; Om Prakash, *European commercial enterprise in pre-colonial India. The New Cambridge History of India* Vol. II.5 (Cambridge 1998) 32].

[11] Walter Grosshaupt, 'Commercial relations between Portugal and the merchants of Augsburg and Nuremberg' in *La découverte, le Portugal et l'Europe. Actes du colloque Mai 1988* (Paris 1990) 394-397.

[12] Geoffrey Parker, *The grand strategy of Philip II* (New Haven/London 1998) 180.

[13] *Parker* 1998: 167, 267.

[14] *Disney* 1978: 170, appendix 3.

[15] *Duncan* 1986: 10, 22 table 1, 15.

[16] *Duncan* 1986: 7. With the increase in size the cost per ton of hiring shipping volume decreased considerably, whereas also less crew were required. In 1600 the cost of a carrack of 1600 tons, with complete equipment and crew for the voyage to India, was about 75,000 *cruzados*. A galleon of 550 tons on the same basis took 33,000 *cruzados*. In 1620 the same carrack took about 130,000 *cruzados* and the galleon 74,000. Also the ship's officers and crews preferred bigger ships: they were better equipped for war and the transport of troops and besides, had more room for the *libertades* (*Boyajian* 1993: 125-126).

to only forty-three instead of fifty-nine during the previous decade. However, their average size was about 10 per cent higher, so that the total tonnage leaving Lisbon was only 10 per cent lower. Boyajian argues that the low number of ships should be attributed to the Portuguese participation in the Invincible *Armada*. [17] This would have put so much pressure on the availability of ships, crews and ammunition that after 1588 the contractors were unable to deliver on time, so that the ships left too late and went down in the prevailing weather conditions. His view finds some support in Oliveira Marques' statement that thirty-one of the 146 most important ships of the *Armada*, including various big galleons, were Portuguese of which the greater part did not return.[18] Boyajian himself refers to seventeen Portuguese warships and four galleys that would have taken part.[19] On the other hand, Geoffrey Parker points out that of the ten fighting galleons which Portugal contributed to the *Armada* (the only ones that were purpose-built sailing warships) only two were lost.[20] He also confirms Elliott's statement that two-third of the 130 ships of the first *Armada* of 1588 were able to return home so that the Spanish could make up for their losses very quickly and after the attack on Cádiz in 1596, were able to send another big *Armada*, which this time was dispersed by storm.[21]

It may well have been the preparations for the latter *Armada* that caused pressure on the shipbuilding programme for the *Casa da Índia*, but another probability is a lack of manpower due to the famines and epidemics mentioned earlier.

A fact is that during the 1590s either the *Casa da Índia* was late in ordering, or the shipyards were late in delivering. One carrack was launched in 1593, another one late 1594, three in 1595, two in 1597, two in 1598 and two in 1600. During the years 1591-1600 in total only eleven new great carracks were built, compared to the seven for the five year period mentioned above, and the sixteen or seventeen in each of the following three decades.[22]

The production of eleven new carracks was in any case not sufficient to cope with the heavy losses of the 1590s. As shown in the previous chapter,[23] these were years of crisis for the Iberian peninsula, but the *Carreira da Índia* sailed head-on into a crisis, which began with the late departure of five carracks in 1590, so that four of them had to return to Lisbon to become *arribadas*, thus forgoing the season, whilst the fifth just made it as an *invernada* in Mozambique. As a result, in 1591 no ships returned to Lisbon.[24] The late arrivals in India started a vicious circle of increasing losses on the way back: because the 'pepper money' arrived too late in India, the fleets missed the pick of the crop and subsequently departed too late again. Furthermore, the officials and merchants at that end, who had been stranded with their merchandise for so

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[17] James C. Boyajian, *Portuguese trade in Asia under the Habsburgs 1580-1640* (Baltimore/London 1993) 23.

[18] A.H. de Oliveira Marques, *Historia de Portugal* (Mexico 1983) Vol.I 315.

[19] *Boyajian* 1993: 23.

[20] *Geoffrey Parker* 1998: 252, 258.

[21] J.H.Elliott, *Imperial Spain 1469-1716* (Harmondsworth 1990) 288-289.

[22] *Disney* 1978: 170-171 Appendix 3.

[23] See chapter 2.

[24] *Boyajian* 1993:24, *Duncan* 1986: 15.

long, allowed the ships to be overloaded beyond capability, so that they were in no condition to cope with the wrong monsoon.[25] In order to maintain the frequency and volume of departures from Lisbon, the ships that were lost had to be replaced by newly built vessels, but the shipyards could apparently not cope with a production of eleven new ones. On the way to India only three vessels were lost, which was not abnormal, but on the return voyages of the 1590s many ships were doomed. Eighteen, or 45% of the ships that left India, were lost, a percentage higher than it had ever been or ever would be.[26] It must almost have come as a relief that in 1598 an English blockade prevented the fleet's departure from Lisbon altogether.

As one may expect during years of crisis, there was no lack of people who wanted to leave for India. According to Duncan's data, their number was higher than ever before and, assuming that the number of heads per ton he used is realistic, even the big ships were overcrowded.

Financing the *Carreira*

Before moving on to the recovery and ultimate decline of the *Carreira da Índia* during the next decades, this is probably the right moment to discuss the financing and economics of the Portugal-India connection.

The cargoes of the outgoing vessels of the *Carreira da Índia* consisted of people, arms, artillery and other necessities to maintain a Portuguese presence in Asia and silver to buy the merchandise for the return fleet. The return cargoes included pepper and other spices, textiles, indigo, jewelry and all kinds of other things that were considered worthwhile to be shipped. Because of the long time it took to get to India and back, getting any kind of return on the initial investment was a long drawn affair and the obvious questions are: who were willing to put their money in such a high risk business and what were the returns?

To arrive at the answers, Boyajian has gathered a wealth of information.[27] However, he was the first to consider his calculations 'controversial',[28] and he has been severely criticized by Om Prakash,

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[25] According to Jan Huygen van Linschoten, who stayed in Goa during the years 1583-1589, this was not an unusual situation because the officers 'even when the ship has thousand defects, conceal them in order not to lose their liberties and the profits they are making thereof, although they know that the ship is not ready to make the voyage: because avarice cheats the wisdom and does not look at the dangers'[Jan Huygen van Linschoten, H. Kern (ed.), *Itinerario. Voyage ofte schipvaert van Jan Huygen van Linschoten naer Oost ofte Portugaels Indien 1579-1592* (The Hague 1910) Vol.II, 105].

[26] The five ships that left Lisbon in 1590 were too late. Four of them returned immediately, the fifth wintered in Mozambique and finally wrecked on the return voyage from India. To compensate for the *arribadas* another three ships were sent in the autumn, of which only a small caravel reached its destination. In 1591 one carrack sank on the return voyage and in 1592 only one of the five that left arrived in Lisbon. In 1593 four of the seven ships were lost, of which one after a fight with three English ships near the Azores. In 1591 and 1599 no ships at all returned from Asia. In 1598 Lisbon was blockaded by an English fleet and that was the first year that no ships left Lisbon for the East (*Duncan* 1986: 15-16).

[27] *Boyajian* 1993.

[28] James C. Boyajian answering his book's review by John E. Wills, Jr. in the *American Historical Review* 99 (1994) 191. See also Idem, 1472. Boyajian indeed overplayed

albeit that in the end the latter had to admit that 'Boyajian's significant upward revision of the role of the Portuguese private merchants is certainly in the right direction and must be duly taken note of'.[29] A remark which leaves the historians with still quite some work to do and which inspired the train of thought following hereafter, which is mainly a correction and an improvement on Boyajian's work.

As discussed in chapter 1, the King of Portugal had the monopoly for the building and equipment of the ships, their navigation and their trade, but others were allowed to share in this monopoly in exchange for the *quinto* (or even more) or the advanced payment of a lump sum. In fact, already with the fleet of Cabral at least one of the thirteen ships belonged to a Lisbon-based private partnership, with the Florentine firm of Marchionni as one of the participants.[30] From then on Italians continued to be involved in the trade with and in India.

During the 1570s not only the preparations for Dom Sebastião's North African adventure, but also the deteriorating yields of gold from Arguim and São Jorge da Mina put so much pressure on the availability of funds that in 1575 a five year contract was awarded to Konrad Rott, a merchant from Augsburg, who took over the royal *Carreira da Índia* monopoly lock, stock and barrel. It included the purchase of spices and pepper in Asia, the preparation and loading of the ships in Lisbon and Goa, the transport to and from India and the distribution in Europe.[31] In 1580, just before the death of Sebastião's successor Henrique, the contract was renewed for another five years. In exchange, Rott and his partners provided an 8 per cent loan of 400,000 *cruzados* (equivalent to 12.2 tons of silver) to the Portuguese crown, with the proceeds of the pepper trade as security.[32]

The next King of Portugal, Philip II, re-ratified the contract and Rott's bankruptcy brought Giovanni Battista Rovelasca[33] from Milan into the consortium, and he, together with the Fuggers and the Welsers, became the main participant in the next contract which was ratified in February 1586 and lasted for six years.[34] The major change was that the distribution of the pepper in Europe was now split off from the Asian contract and taken over by a different consortium, which not only included the Fuggers and Welsers, but also the Portuguese Tomés and André Ximenes as the main participants. The pepper was brought to the markets via their correspondents in Hamburg, Lübeck, Amsterdam, Middelburg, Leghorn and Venice. In the last two years of the contract Amsterdam received in this way about

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his hand, but some of his data can still be used, as will be done in the present argument.

[29] Om Prakash, *European commercial enterprise in pre-colonial India* (The New Cambridge History of India II.5, Cambridge 1998) 37-39.

[30] Sanjay Subrahmanyam, *The career and legend of Vasco da Gama* (Cambridge 1997) 175.

[31] See letter from Cunertorff in Lisbon to Jansen in Amsterdam, dated 7/8/1578 [*Nanninga Uitterdijk* 1904: 131-134].

[32] *Boyajian* 1993: 18-21.

[33] Rovelasca was the same man who in 1586 also obtained the collection of duties on the private imports from Asia [*Boyajian* 1993: 19].

[34] H. Kellenbenz, 'Autour de 1600: Le commerce du poivre des Fugger et le marché international du poivre' in *Annales, Economies, Sociétés, civilizations* 11 (1956) 1.

10 per cent of the pepper; the major part went to the northern German cities.[35]

From 1587, a noteworthy shift occurred amongst the participants of the Asia consortium. Twelve parts out of thirty-two were taken over by the Ximenes family[36] and after the severe losses suffered in the first few years of the 1590s, the Fuggers and Welsers sold their shares and the Asia consortium became one hundred per cent Portuguese.[37] The European consortium followed a similar direction: the Fuggers sold their shares to Lope Ruíz Evora in Lisbon, who had correspondents in Antwerp.[38] Thereby the supply of pepper to Lisbon and the distribution in Europe continued to stay in two different hands.

The bookkeeping of those times does not allow a good assessment of the profitability of these contracts. The little that is known about the gross revenues of the *Casa da Índia* includes the lease of the collection of customs by 'tax farmers', but does not take into account the cost of outfitting and maintenance of the ships. Besides, both the *Casa da Índia* and the contractors were playing the market and sometimes kept considerable quantities of pepper in stock, waiting for prices to go up. Sometimes they won and sometimes they lost. In 1588, when there was a shortage of pepper, the *Casa da Índia* kept its sales price to the distribution contractor for months at 60 *cruzados* per *quintal*.[39] In 1589-1590 the Asia contractors had to accept pepper instead of money against the rate of 38½ and in 1591 the European contractors could buy it for 37 *cruzados*.[40] Consequently, one can never know which price belonged to which volume and the multiplication of 'average' volumes and 'average' prices over contract periods of five or six years makes little sense.

Nevertheless, the available data allow the establishment of trends in the volumes of the pepper supply and the profits made on either side during the period 1580-1597. Appendix 3.2 shows that during 1580s, and in particular in the 1590s, the Portuguese pepper trade went into decline, i.e. before the time that the Dutch threw their Asian purchases on the European market. Over the three contracts the volume of pepper was reduced from a comfortable 20,000 *quintals* per annum to 15,000 and thereafter to slightly more than 9,000. The resultant drop in revenues of the *Casa da Índia* was partly compensated by the increasing income from duties on the private imports of the Asia contractors. For them the pepper business on its own became a non-paying proposition.

The direct cause of this decline was the bad performance of the *Carreira da Índia* during the 1590s. However, notwithstanding the considerable drop in the Portuguese volumes of pepper during that decade, prices in Lisbon did not go up dramatically. The reason for this must be that during the period, the price was the resultant

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[35] *Kellenbenz* 1956: 10.

[36] *Grosshaupt* 1990: 396. For the background and activities of the Portuguese Ximenes family see e.g. *Boyajian* 1993: 27, 34, 117, 173-174.

[37] *Boyajian* 1993: 33-38, 254-257.

[38] K.S. Mathew. 'Indo-Portuguese trade under Dom Philip I of Portugal and the Fuggers of Germany' in Arturo Teodoro de Matos, Luís Filipe F. Reis Thomaz (eds.) *A Carreira da Índia e as rotas dos estreitos* (Actas do VIII seminário Internacional de história Indo-Portuguesa) (Angra do Heroísmo 1998) 579-580.

[39] Multiply *cruzados* per *quintal* by 0.593 for conversion into grams of silver per kilogram.

[40] *Kellenbenz* 1956: 20.

of an almost stagnant demand and of two supplies: that from Portugal and that from the much-disputed caravan route via the Levant and Venice.[41] In other words: 'Venetian trade enjoyed revival when the Portuguese trade foundered'.[42] It was only after 1599, that the success of the Dutch voyages to the Indies caused panic in the European pepper and spice market.[43]

The financial results of the *Casa da Índia* during those years still get another dimension if one considers who was responsible for equipping the vessels and who paid for the costs of shipping. From mediaeaval times, the building and equipping of ships had been a royal monopoly, now in the 1580s these activities were contracted out, but the *Casa da Índia* still had to bear the brunt of the shipping costs. This was not illogical, because the fleets also served to bring manpower and materials to India and to take the people, who had served the *Estado da Índia* or their own personal interests long enough, back home.

Kellenbenz mentions that according to the contract that was ratified in 1586, the contractors had to devote annually 24,000 *cruzados* to the equipping of five ships. Later on the *Casa da Índia* agreed that for that purpose they would include 4 *cruzados* per *quintal* in the price which they paid for the pepper.[44] Obviously, this small contribution was only meant to cover running costs: in that time the complete outfitting of a carrack of say, 1,000 tons must at least have cost 50,000 *cruzados* per ship.[45]

Against this background, after 1585, for the *Casa da Índia* the results of the pepper trade must have been dramatic, in particular in a year when no ships returned at all, such as e.g. in 1591. In order to get the next fleet on its way to India and in view of the long intervals between the arrivals, it must have relied on the income from the collection of customs, but more often on the sale of *juros*. Magalhães Godinho mentions that during 1588 the *Casa da Índia* paid out of their gross revenue 31,000 *milréis* (2.4 tons of silver) on interest and amortization of *juros*.[46] According to Boyajian these payments were almost a sure sign that Philip had found a way to siphon off funds from the Portuguese *Estado* for the common Iberian war effort.[47] The issue of *juros* by the *Casa da Índia*

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[41] N. Steensgaard, *The Asian trade revolution of the seventeenth century. The East India Company and the decline of the Caravan Route* (Chicago 1974) 155-169, 171.

[42] C.H.H. Wake, 'The changing patterns of Europe's pepper and spice imports ca 1400-1700' in *Journal of European Economic History* 8 (1979) 383-387.

[43] After the return of Van Neck in August 1599 the Lisbon correspondent of Ruíz Embito already wrote that the arrival of four Dutch ships from East India, with 8,000 quintals of pepper and 4,000 quintals of cloves could mean the ruin of the Portuguese trade in spices [J. Gentil da Silva, *Stratégie des affaires á Lisbonne entre 1595 et 1607. Lettres marchandes des Rodrigues d'Evora et Veiga* (Paris 1956) 63-64.

[44] *Kellenbenz* 1956: 2, 20.

[45] Obtained by interpolation of data from Duncan's figures, see note 17. *Boyajian* 1993: 21, 22, 27 uses 250,000 *cruzados* per annum, apparently independent of the number of carracks that left. As will be shown in chapter 7 the costs of outfitting per metric ton of freight of the carracks did not differ from those of the Dutch ships sent to the Indies.

[46] *Magalhães Godinho* 1981: 39

[47] *Boyajian* 1993: 26 points out an assignment in 1586 of 345,000 *cruzados* from the Indian customs revenue as financial support to the Portuguese participation in the *Armada*. In his view the sale of *juros* against future Indian custom revenues,

was however in the first place necessary to bridge the time gaps between payments and receipts and not necessarily to support Philip's wars.

Another aspect of the outfitting contracts was that the contractors of the *Carreira da Índia* hardly felt responsible for good management and maintenance of the ships,[48] whereas their own cargoes were mostly covered by insurance. They probably took risks which otherwise they would not have taken.

The pepper money

Assessing the total quantities of silver and money that were dispatched from Lisbon in order to buy pepper in India and return that to Lisbon is also a challenging task. To start with, most authors tend to confuse currencies and ports of departure with ports of arrival and their results are incompatible (see appendix 3.3 and in particular its note). The main problem however is that in both directions ships got lost, something that very few writers (with the possible exception of Reid?) have been willing to take up in their calculations.

For the 1590's the quantities pepper arriving in Lisbon are well known and for a total of 21 (out of 22) ships Boyajian arrives at 96,268 *quintals*.[49]

Correcting for the one missing ship, the total amount of pepper that arrived must have been about 100,000 *quintals*. During the decade forty cargoes were dispatched from India, of which eighteen got lost (appendix 3.1c). Therefore, assuming an equal distribution of pepper over the various ships, the amount of pepper sent with the return fleet must have been in the order of 182,000 *quintals* and at the going rate of 8 *cruzados* per *quintal* in India these would have represented a capital of 1,456,000 *cruzados* (44.4 tons of silver). This quantity was landed by the thirty-nine vessels that arrived safely in India and that were left over from the original number of forty-three cargoes that were sent from Lisbon (appendix 3.1a and b). Assuming that the silver was also equally distributed over the vessels, this means that during the 1590's 1.6 million *cruzados* or 49 tons of silver were shipped from Lisbon.[50] Taking into account the relative low number of departures during the decade, that number, just like Boyajian's number of 36.6 tons of silver for the years 1580-1585,[51] seems to fit well into Reid's column (appendix 3.3). For the sake of the discussion of the total quantities of silver

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from the early 1580s on, was used for the war in Flanders. The *juros* bore an interest of 7 percent and by the 1590s amortization of the debts consumed already 35,000 *cruzados* per year of the custom revenues.

[48] *Boyajian* 1993: 124-125.

[49] *Boyajian* 1993: 248-250. His data are for the greater part the same as those presented by *Magalhães Godinho* 1991: III, 75. *Prakash* 1998: 40 table 2.4 also uses Godinho's data, but confuses the quantities discharged in Lisbon with those loaded in India. The difference is however small, compared to the error that most authors make, by not taking into account the shipping losses on the return voyage.

[50] An equal distribution of the silver over the ships is certainly not a fool proof assumption. Using tonnage instead of number of ships for the calculations does not lead to very different results. The same calculation with the shipping data from *Lopes* 1992: 227 leads to 43 tons of silver leaving Lisbon during the 1590's.

[51] *Boyajian* 1993: 21.

dispatched from Lisbon into Asia, which will follow in chapter 4, Reid's data will therefore be accepted.

The private trade

According to Duncan's estimates the ships on the way back to Portugal carried 200-500 persons per ship, of which about 120 were crew. Each of them, depending on his position, had the right to bring one or more chests to carry his private belongings, which could include pepper, textiles or other merchandise.[52] These *libertades* have often been described as an abuse or as a typical example of Portuguese corruption, but on the English and Dutch fleets the *liberties* or *liberteiten* were also common practice. Besides using the privilege for one's own purposes, it could also be sold to a merchant. Furthermore, shipping space could be let to merchants or to the viceroy and his officials, to send their own merchandise home. Upon arrival in Portugal a part of the goods could be imported tax free, after a deduction for the relief of the poor. For the major part import duties had to be paid to the collector of the customs, except, of course, by the *Casa da Índia*. The duties were based on the value given by the merchants themselves, who sometimes were also participants in the consortium that was collecting them. The *Casa da Índia* kept control of the discharging, but this did not exclude smuggling. For the transfer of capital diamonds was the preferred merchandise to take home.[53] These and other precious stones, together with cottons and silk, were often not registered or declared upon arrival in Lisbon; a fact that in 1621 was even testified to by Portuguese merchants before an Amsterdam notary.[54]

An attempt to estimate the value of the private imports into Lisbon has been made by Boyajian,[55] but the figures he arrives at are most probably too high. A more conservative approach is to assume that the fee the customs collectors had to pay to the *Casa da Índia* was close to 20 per cent of the declared value, or, in the 1590s,

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[52] C.R. Boxer (ed.), *The tragic history of the sea, 1589-1622. Narratives of the ship wrecks of the Portuguese East Indiamen* (Cambridge 1959) 278 gives a list of *libertades* for the different echelons and their sales value.

[53] In Diogo do Couto's story of the wrecking of the *São Thomé* diamonds are the capital for which one has endured the hard life in the *Estado da India*, they are the only things the shipwrecked people can take with them and for some of them the most important they worry about on their long journey to the 'civilized' world (*Boxer* 1959).

[54] *GAA Not.arch*. 645 B, film 4955 II, pages 1249, 1250, 1284, 1312, 1316-1318. Notary Sibrant Cornelisz. No doubt, they made their statement in connection with the insurance of a lost cargo. Their statement suggests that these goods were regularly not registered.

[55] *Boyajian* 1993: 248-250. The basis of his calculations are the duties paid to charitable establishments. With the small correction for the number of ships, including the spices, indigo and textiles, but excluding the diamonds, the value of the private merchandise landed in Lisbon would have amounted to 36.4 million *cruzados* (1110 tons of silver). Taking into account the losses on the return voyage and using a multiplier of 2½-3½, the value of merchandise to be shipped from India would have been at least 576 tons of silver, or further back to Lisbon: 635 tons of silver. This is roughly one third of the private silver recorded in Sevilla, which is highly improbable.

75,000 *cruzados* per carrack.[56] During the 1590s the twenty-two ships arriving in Lisbon were not all carracks and the galleons carried a lower fee. Therefore the income from customs was probably not much more than 1.65 million *cruzados* and the total value of private goods in the order of 8 million *cruzados* (240 tons of silver). Taking into account the shipping losses and assuming a multiplier of 2½-3½ for what the merchandise was worth in Europe compared to what it cost in India,[57] the value of the goods loaded on the ships departing from India would then have been 125 tons of silver and the quantity of silver dispatched from Lisbon 138 tons, to which the 49 tons of pepper money would still have to be added. The Portuguese merchants in Lisbon, although at that time they were not yet fully involved in the silver fleet operations, must have been able to handle this amount of money, even if for one or more years the ships did not return.

Admittedly, the calculation is very rough and may be an under-estimation of the real volume of the trade,[58] in particular if one takes into account that the private purchases in India did not always have to be covered by silver imports. Part of the private merchandise, and in particular the diamonds, were bought with the profits made in Asia. Besides, it was also possible to borrow from the legacies which had to be transferred to the heirs in Portugal or from the legacies which had fallen into the hands of the *misericórdias*, which were paid back via letters of exchange.[59]

Another weakness is the multiplier used for the price differences in India and Europe. Until the 1620s the multiplier which was used above, was still applicable, at least for the pepper, as can be readily concluded from appendix 3.4, which gives purchase prices in India and selling prices in Lisbon. From the end of the 1620s, with increasing prices in Asia and decreasing prices in Europe, it reduced to 2-2½. Whether the sales and purchase prices of textiles and the other commodities followed a similar pattern is not known.

From the end of the 1580s there was an upward trend in the volumes of private merchandise, in the form of spices and textiles,

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[56] Following information gives some support to the idea that the twenty percent was more or less equivalent to 75,000 *cruzados* per carrack. In 1593 a new duty was introduced of three percent on the commercial movements in the ports, the so-called *consulado*, for the defence of the Portuguese coast against privateers. In 1607 this levy was expected to produce 15 million *réis* for the *Estado*,[*Magalhães Godinho* 1981: Vol. III 36,38] whilst the revenue from normal import duties was estimated at 90 million *réis*, a figure that consequently, must have been close to eighteen percent of the imported value. The total of 105 million *réis*, or 263,000 *cruzados* must therefore have been twenty-one percent or say, close to twenty percent. In 1607 there were three carracks arriving from India and the farming fee must therefore have been 88,000 *cruzados* per carrack, a figure that in turn finds support in Boyajian's remark that until 1598 the customs farming fee amounted to 75,000 *cruzados* per carrack, but that thereafter it was steadily negotiated higher [*Boyajian* 1993: 131].

[57] *Boyajian* 1993: 291, note 75. For the VOC returns one can also calculate that the sales prices in Amsterdam were about three times the purchase prices in Asia [F.S. Gaastra, *De geschiedenis van de VOC* (Bussum 1982) 124 and 135].

[58] Around 1585, looking from the Indian side, Van Linschoten estimated that each carrack, leaving Cochin, carried at least 'one million in gold', i.e. the equivalent of 30 tons of silver. See also appendix 3.3 with note. It will be clear that this kind of general, somewhat exaggerated remarks should not be taken too seriously.

[59] *Boyajian* 1993: 82-85.

on board of the return vessels of the *Carreira da Índia*.[60] It is significant and logical that this trend developed from the time that the royal monopoly of the India trade was contracted out.

Profitability

Notwithstanding the uncertainties around the data that were developed in the two previous sections and in appendix 3.2, they can be used for an exercise, which throws an interesting light on some of the business aspects of the *Carreira da Índia*. Appendix 3.5 presents, for the 1590s, the total outlays of the *Casa da Índia* and the Asia contractor and the returns on their investments, which took on average 1.4 years to materialize.[61] The outlays consisted of the outfitting of the ships, against a cost of 50,000 *cruzados* per ship, and the pepper money and private money. The returns were the money made on the pepper by each of the two parties in the contracts, the custom revenues and the income from private merchandise. From the very simplified calculation one might conclude that, even in the bad years of the 1590s, the *Casa da Índia* made 43 per cent and the Asia contractors 29 per cent on their investment!

A similar calculation has been made for the case that the *Carreira da Índia* would have been a fully privatized enterprise, dispatching the same number of vessels with the same (poor) number of returns with the same quantities of pepper and private merchandise, but with a 20 per cent duty on all imports, including the pepper. Not surprisingly, for the *Casa da Índia* this would have been a much better deal, as Olivares also would discover in the late 1620s. However, for the privatized enterprise, only making 6 per cent in 1.4 years (4.3 per cent per annum) on its initial investment, the 1590s would have been very bad news indeed.

That their situation as a fully privatized enterprise would have been that much worse is caused by the fact that the costs of outfitting would have fallen into their lap and that they also would have had to pay import duties on the pepper.[62]

The above exercise gives rise to another question: how could a fully privatized *Carreira da Índia* ever survive? The advice of a modern consultant would probably be: in the first place spread your risks and improve the reliability of your shipping operations; do not limit yourself to pepper, but handle a wider range of products: in particular spices, cottons and silk; try to get subsidies from the state for the outfitting of ships: they have a military and political interest after all; postpone the payment of taxes and duties or avoid them altogether and call this a subsidy in exchange

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[60] *Prakash* 1998: 36 table 2.3, quoting data from Niels Steensgaard, 'The return cargoes of the Carreira in the 16th and early 17th century' in Teotonio R. de Souza (ed.), *Indo-Portuguese History; Old Issues, New Questions* (New Delhi 1985) 22. See also Afzal Ahmad, *Indo-Portuguese trade in seventeenth century (1600-1663)* (New Delhi 1991) 90-109.

[61] *Duncan* 1986: 12-13.

[62] The author is aware of the many simplifications in this approach, but it is only meant to illustrate the strengths and weaknesses of the *Carreira da Índia*. The calculation cannot be too far off, however, because the charter of the Portuguese India Company offered its participants a 4% return on their investment! The major problem for both 'investors' remained the totally erratic way in which the ships did or did not, return.

for your services to the state. As will be shown later, the Dutch VOC would have to use all these options.

For the Habsburgs and for the Portuguese of the *Casa da Índia* pulling out voluntarily from the *Carreira da Índia* to catch only the import duties, was at that time unthinkable. The Portuguese merchants on the *Carreira da Índia* did not give up either, because their trade, which was the product of their Asian trading system, was thriving on the back of the *Casa da Índia*. The European contractors were the ones who received the blows and some of the Portuguese distribution agents in the North European markets withdrew from the pepper trade altogether.[63] This by no means meant the end of the *Carreira da Índia*, but it opened an outlet for the Dutch pepper and spice trade, with sales directed towards the Baltic.

Relapse and decline

In 1598 the European pepper contract was renewed for only one more year and the Asian contract with the Ximeneses lapsed without renewal. Boyajian suggests that the Portuguese consortium had doubts because the Dutch had just completed their first successful voyage to the Indies,[64] but most probably, the two parties involved had both something more complex in mind than the simple contract that had been used so far. Philip III had just taken over the throne and as shown earlier, the New Christians were offering money to obtain 'equal rights'. Philip and Lerma were eager to get access to that money, but for some time the Portuguese institutions were successful in opposing that idea. However, in 1601 the New Christians scored their first temporary success.[65]

Whilst the contract stayed in limbo, the *Carreira da Índia* continued to function. After the many mishaps of the 1590s, suddenly in 1600 six carracks returned from India. The quantity of pepper they brought was so much that it caused a fall of the prices, but it was still sufficient to pay for the fleet of the next year. The contract was not renewed again, but from now on the business was run on the basis of serving the mutual interest of all the parties involved.

The *Casa da Índia* took back again the complete royal monopolies of the outfitting of the ships, the navigation to India and the pepper trade both in India and in Lisbon.

The Portuguese merchants kept using the *Carreira* for their private trade with Asia, which included the merchandise from their intra-Asian trade. The *Carreira* was for them the only possibility way to achieve this and in order to keep the *Carreira* going they were not only willing to pay the freight and custom charges, but also, if necessary, to provide additional loans to the *Casa da Índia*.[66]

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[63] James C. Boyajian, *Portuguese bankers at the court of Spain 1626-1650* (New Brunswick N.Y. 1983) 7.

[64] *Boyajian* 1993: 86.

[65] See chapter 2.

[66] A.R. Disney, *Twilight of the pepper empire. Portuguese trade in Southwest India in the early seventeenth century* (Cambridge Mass. 1978) 72 states that after 1600 the private entrepreneurs lost their interest as a result of the English and Dutch interventions on the pepper market and the crown had to take the pepper trade and a part of the shipment in her own hands. Only the freight and excise contracts stayed until 1616 in private hands. However, there can be no doubt that the private merchants

The New Christian merchants also wanted to improve their legal and social position and this was only possible with the approval of the king and his Portuguese council.

The monarchy needed money, preferably in Brussels, and the Portuguese merchants were keen to keep their role in the lucrative *asientos*, either via the Genoese bankers of directly. For the merchants the only way to achieve this was buying the pepper from the *Casa da Índia* and sell it, together with some of their private merchandise, amongst others diamonds, in or via Antwerp.

In the meantime, the quantities of pepper brought on the market by the North Europeans began to have their negative effect on the price. Under those circumstances, and to ensure a more or less regular income and the continuation of the *Carreira*, the purchase of the pepper by the Portuguese merchants was made compulsory, against a pre-set price, which was above the European market price. This pepper allotment, the so-called *repartição da pimenta*, cost them annually something like 300,000 to 500,000 *cruzados* and was obviously not popular amongst the merchants, but it was a way to let them contribute towards the costs of the fleets.[67] At this time they were even prepared to lend another 200,000 *cruzados*, assuming that the money would be used for the fleet to India.

Part of the funds probably went to the South Netherlands, where Philip had started his new offensive and in 1602 it was even decided that the payments for the pepper would take place in Brussels. On the other hand, of the revenues from the general pardon for the New Christians of 1604, more than 1,1 million *cruzados* were spent on the *Carreira*.[68]

In the years 1601-1610, a renewed *élan* picked up the growth trend in the *Carreira* business from before the 1590s. Seventeen newly built ships were launched, which helped to realize seventy-one departures, with a total volume of more than 77,000 tons. Even taking in account the six *arribadas* this was more than ever before.

In the years 1611-1620 sixteen new ships entered the *Carreira* service. The number and tonnage of the departures was slightly lower (sixty-six and 60,000 respectively, with seven *arribadas*), but still bearing witness of a considerable optimism.[69] This only slightly

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maintained an interest in the textiles, indigo, spices and diamonds which were brought by the same ships. The fact that the merchants continued to have a private interest in the *Carreira* besides the pepper contract is confirmed by quite a few insurance claims for lost cargoes or damaged goods in the notarial archives in Amsterdam (see chapter 6).

[67] *Boyajian* 1993: 86-105 gives a rather emotional description of the *Carreira*' finances, presenting the New Christians as the poor people who had to cope with the king's, or rather, Lerma's whims. Of course, one must assume that the merchants knew what they were doing and that they would not engage in any deal that had not a certain advantage to them. Their payments for the pepper were in fact a contribution to the costs of outfitting of the carracks, shared by the big investors, but also by the many small participants. Boyajian informs us that there were about 200 individual private investors in the *Carreira*, not including the ship's officers and crews with their *libertades*, with the major part being in the hands of six New Christian families in Lisbon.

[68] *Boyajian* 1993: 94, table 8.

[69] See also *Subrahmanyam* 1993: 142-143. In his opinion this phenomena undermines the hypothesis that after 1570 the trade overland, via the Middle East, was resurrected

faded away in the years 1621-1630, when again sixteen new ships were built and sixty departures took place with a total tonnage of 48,000, which, notwithstanding the thirteen *arribadas*, was still almost the same as before 1580, although the time of the great carracks was over.[70]

The optimism of those years is all the more amazing, considering the circumstances under which the business decisions had to be taken, because the losses on the voyages were enormous: during both the 1600s and the 1610s only twenty-eight ships returned to Lisbon.

In the years 1601-1610 four ships were apparently retained in Asia and five were lost there, but thirteen ships were lost on the outward voyage and seven on the return voyage. Besides, in 1606 the departure of seven ships had to be postponed for one year because of the blockade of Lisbon.[71]

In the years 1611-1620, that is the time of the Twelve Year's Truce (at least in Europe), eight ships were lost on the outward voyage and three on the return.

During the latter period, the number of ships departing from Europe included the two galleons and six caravels[72] that were sent in 1612 to join the combined Iberian fleet in the Philippines, after the news had come from Amsterdam that the Dutch were preparing twenty ships to be added to the fleet of forty-nine which they already had in the Asian waters. The Manila part of the Iberian fleet reached its destination in April 1614 without any losses.[73] During the decade, five ships were retained in Asia for the defence of the *Estado da Índia*.

Obviously, the heavy losses amongst the merchant ships on the outward voyage had more to do with the condition of the vessels and the quality of the pilots than with overloading. It is noteworthy that the Castilian fleet did not suffer from this problem, nor did the Portuguese India Company during the 1630s. One can only point one's finger at the *Casa da Índia* and its apparent lack of supervision on the building and outfitting of the ships. But again, they must have suffered from the sheer haphazard way they received their money, either through loans or from the pepper sales.

In 1618 the Portuguese merchants refused to buy the pepper against the prices, set by the *Casa da Índia*.[74] A compromise was

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again. Apparently he overlooked the increasing interest in the private trade on the *Carreira da Índia*.

[70]The numbers of departures include the *arribadas* that returned to Lisbon after their departure and probably made a second attempt thereafter. Correcting for the *arribadas* brings the number of successful departures down to 65 during 1600s, 59 during 1610s and 47 during 1620s. *Lopes* 1992: 227-228 quotes for these decades 59, 51 and 48 successful departures. The increasing number of *arribadas* is in line with the increasing number of ships lost on the outward voyage and confirms the conclusion following hereafter, that either the ships were too late or already leaking soon after their departure from Lisbon.

[71]*Boyajian* 1993: 93, Victor Enthoven, *Zeeland en de opkomst van de Republiek. Handel en strijd in de Scheldedelta c. 1550-1621* (Leiden 1996) 188-192.

[72]This leaves 53 successful departures on account of the *Casa da India*, which makes their percentage loss still higher.

[73]See also chapter 8.

[74]According to *Disney* 1978: 112, the official pepper price of the *Casa da India* in Lisbon fell from 45-45½ *cruzados* per *quintal* in 1617 to 28 *cruzados* in 1621, the

reached after the most important of them had been put in prison: the further financing of the *Carreira* would hereafter be done by compulsory loans.[75] Furthermore, by seizing the import duties, which were still farmed out, and with loans, the *Casa da Índia*, supported by Philip III, succeeded in getting enough money together for a new idea: the direct connection between Lisbon and Malacca. However, because the Persians were threatening to take Hormuz, the two galleons that were leaving in 1618 had to be sent there.In 1617-1618 Viceroy Count Redondo was still able to breathe new life into the *Carreira* and 1618 and 1619 were the best years of the decennium.[76]

Effects of Dutch/Anglo aggression

During the 1620s sixty departures took place from Lisbon and only nineteen ships came back from India. In December 1622 a combined Dutch/English fleet, under Jacob Dedel arrived off Goa and was able, until April 1623, when they returned to Batavia, to blockade the departure of seven ships of the *Carreira* return fleet.[77] In the same time a part of the Dutch/English fleet sailed to Mozambique where it encountered the outward bound fleet from Portugal, with the re-appointed viceroy Francisco da Gama and 200,000 *cruzados* (6 tons of silver) on board. Three of his ships and the greater part of the silver were lost. A few months later another carrack, this time on the return voyage, was destroyed near the East African coast.[78]

The total losses of the *Carreira* amounted to eleven vessels on the outward voyage and eight on the return voyage. Nowhere is there confirmation that the latter losses, except the one mentioned above, were due to the blockade of Goa. Whether after the blockade the Portuguese ships remained wintering in Goa or took the risk of an untimely departure is unknown. More ships than ever were kept in Asia: nine altogether.

It is highly unlikely that the short outburst of Dutch/English aggression was a reason to withdraw from the *Carreira*. Dutch reports continued to confirm the arrivals and departures of Portuguese carracks in Goa, including those that went to fight the Dutch/English fleet in an attempt to regain Hormuz in April 1625.[79] Hereafter, the English for various reasons, amongst them what they called the 'massacre' of Amboina in February 1623, (the VOC spoke of the 'revolt'),[80] refused

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lowest point was 1627 with 19½-17 *cruzados* per *quintal* (see appendix 3.4).

[75] *Boyajian* 1993: 102. Many of those that were imprisoned were the same who less than a decade later appeared in Madrid as *asentistas* to the Castilian crown [*idem* 1983: ix].

[76] *Boyajian* 1993: 99-100.

[77] *ARA* 1.04.02 inv. 1078, fo 1-3, 8, 396-400; inv. 1076, fo 288; *Generale Missiven* I, 126 letter of 24/2/1623. See also chapter 8.

[78] *Generale Missiven* I: 126, 129 and 131, letters of 24-2-1623, 25-12-1623 and 3-1-1624 mention only two ships, Coen, on 21/9/1623, in his 'Vertoogh van de staet der Vereenichde Nederlanden in de quartieren van Oost-Indiën' [*Coen* IV, 590-591], reported three carracks near Mozambique and one near the Cape, coming from Goa, notwithstanding the Dutch/English blockade. *Disney* 1978: 172-173, presenting the life span of the carracks of the *Carreira da Índia*, confirms the three, by name, near Mozambique and mentions a fourth carrack that was destroyed near the East African coast.

[79] *ARA* 1.04.02 inv. 1085, fo 174-182; inv. 1084 fo 1a-5; inv. 1090 fo 90-96.

[80] See chapter 8.

to join the Dutch again in another blockade and the latter had to ask for reinforcements from their home country.[81] It took until 1636 before the Dutch were able to assemble a new fleet off Goa, this time in connection with the blockade of the Malacca Straits.[82]

Shifting focus

Dutch reports shed an interesting light on what was to become another basic problem for the *Estado da Índia*. Already in 1620 the administrators of the VOC in Amsterdam wrote that in Europe, the Portuguese had insufficient people to man their ships.[83] This confirms Duncan's data for the 1620s, showing a considerable drop in the number of men leaving for India and in the number of heads per ship.[84] In December 1629 the council in Batavia reported that five to six galleons were said to be in Goa, unable to depart because of the lack of crew and materials. The Portuguese in Goa were only released from this frustrating situation in 1630 by the arrival of D. Miguel de Noronha, Conde de Linhares, the new viceroy. He was now also acting on behalf of the Portuguese East India Company, with four galleons and three carracks,[85] and brought the necessary materials for repairs and people for the return voyage.[86] However, this short-term solution had little effect in the long term: the trend was to continue. The Portuguese were no longer willing to go or be forced to go East.

This point is the more interesting if one remembers that during the years 1620-1640 the emigration from Portugal rose to 5,000-8,000 people per year (see chapter 1). It may well be that the Portuguese sailors found employment in the increase of the Iberian fleets in 1620 and of the *Almirantazgo* in 1624 (see chapter 2). Also the *jornada dos vassalos* for the liberation of Bahia from the Dutch, which began in Lisbon in November 1624 with the participation of twenty-two Portuguese ships, may well have taken more than 5,000 people, albeit that the majority of them belonged to the nobility.[87] In view of the increase in the Portuguese population in Brazil during the same period there can however be little doubt that for the Portuguese emigrants this indeed had become the preferred destination.

The other Portuguese who, during the 1620s, shifted focus were

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[81] *Generale Missiven* I: 142-143, 196, letters of 3-1-1624 and 3-2-1626.

[82] *Generale Missiven* I: 394-395, letter of 15-12-1633 and message from Jacob Cooper to Gentlemen XVII, *ARA* 1.04.02 inv. 1121, fo 1643-1644.

[83] *Coen* IV: 475, Gentlemen XVII to Coen 12-12-1620.

[84] M.A.P. Meilink-Roelofsz, *Asian trade and European influence in the Indonesian archipelago between 1500 and about 1630* (The Hague 1962) 129, concludes that already in 1588 the high deadrate on board and the many shipwrecks caused by the fact that the ships were too big and too heavily laden, seriously reduced fresh supplies of manpower. This must be the product of unclear thinking: the carracks were only heavily loaded on the return voyage, after they had brought the men to India. Besides, Duncan's data (table 3.1 c) suggest that during the 1580s manpower shortages may have been caused by the fact that more people left India to return home than ever before or thereafter.

[85] *Disney* 1978: 65 speaks of 4 out of 6 galleons that reached the Indian Ocean.

[86] *Generale Missiven* I: 267, 274 and 283-286, letters of 15-12-1629 and 7-3-1631. The first message also refers to the establishment of a Portuguese company with a capital of 400 tons of gold.

[87] *Boxer* 1952: 60. The complete fleet consisted of 52 ships, 22 Portuguese and 30 Spanish, with in total 12,566 men.

the New Christian merchants who were supporting the *Carreira da Índia*. As shown earlier, in 1626 the first Portuguese contracted a direct *asiento* with the Castilian treasury. This was repeated in 1628, on a much lager scale, against a very low premium on the silver, but in exchange for the proclamation of 1629, allowing all New Christians access to the Castilian empire. Very soon, the same merchants who had been involved in the *Carreira* appeared in Madrid or in Sevilla as *asentistas* or merchants. They could now afford to turn their backs on the *Carreira* and the pepper business.

Decline

In the 1630s the *Carreira da Índia* came onto a downward slope with only thirty-three ships leaving for India with a total tonnage of 20,000 (i.e. not more than 600 tons per ship) and twenty-one ships returning during the decade. This downturn was immediate, as from 1630 itself. According to the Dutch reports no ships from Portugal arrived in Goa during the years 1631 and 1632,[88] and according to Portuguese sources, during the years 1630-1635, that is in six years, sixteen ships departed from Lisbon of which all arrived in Goa.[89] That number of departures is less than half the number of ships one would expect from previous years: on average only 2.7 against 6-7 per annum.

The major cause of this decline was the establishment of the Portuguese East India Company that began its operation in 1629.

From its conception the company had to struggle against the odds. Nobody trusted this type of enterprise, which after all, was initiated by Castilians.[90] Besides, it was the wrong time to try and obtain big financial loans.[91] In 1626 the first Portuguese bankers had been accepted as *asentistas* to the amount of 400,000 ducats (14 tons of silver). Almost at the same time, in 1627, Olivares concluded the negotiations with the New Christians for a loan of 1,500,000 *cruzados* (46 tons of silver), and in 1628 the capture of the silver fleet by Piet Heyn and subsequent mishaps caused a shortage on the silver market which would last several years.

The company was to concentrate largely on the pepper trade, and to a lesser extent on indigo, rice, cowries and ebony; all merchandise in which the Portuguese merchants had lost interest. As demonstrated earlier, the chances of survival of such a company, with the pepper trade as its main basis, were very remote and this must have been the main reason why it failed to get the necessary financial support.

The New Christians were not in the least interested in lending

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[88] *Generale Missiven* I: 338 and 382, letters of 1-12-1632 and 15-8-1633.

[89] *Magalhães Godinho* 1991: III, 49.

[90] Rafael Valladares, *La rebelión de Portugal 1640-1680. Guerra, conflicto y poderes en la monarquía hispánica* (Valladolid 1998) 28 mentions in particular the Portuguese *Conselho da Fazenda* that was afraid to lose control of the Indian trade and the merchants of Goa who did not like the monopolistic regime imposed by Madrid.

[91] See for foundation and development of Portuguese India Company *Disney* 1978: 72-85, 118, 120, 139-144 and George D. Winius, 'Two Lusitanian variations on a Dutch theme: Portuguese companies in times of crisis, 1628-1662' in Leonard Blussé, Femme Gaastra (eds.) *Companies and Trade* (Leiden 1981) 120-126.

money to a company against, as stipulated in the charter, a fixed interest of only 4 per cent, whereas the subscriber's capital would be liable to confiscation if he were condemned for heresy. Even the New Christians who were directors of the company did not participate with capital.

Grafting the new company onto the existing administration of the *Estado* also appeared to be an impossible dream; it soon came in conflict with the personal interests of the officials of the *Casa da Índia* and the *Estado da Índia*. The pepper trade itself became a disaster, partly because of the Indian famine of 1630, which played havoc with the harvesting and handling of the pepper. During the years 1630-1632 ships returned not fully loaded and they became largely filled again with private, non-company goods like textiles, spices and cinnamon. At that time about one third of the company's income consisted of duties and freight charges on private cargoes coming from India,[92] which at least on one occasion were insured in Amsterdam.[93]

The Portuguese India Company project was abandoned in April 1633.[94] Notwithstanding the many complaints about the lack of supplies and the bad food on board, during its years of operation no ships were lost on the outward voyage. On the return trip, three out of nine leaving Goa wrecked. After 1634 there continued to be reports of carracks arriving in Lisbon half-empty.[95]

The 1640s brought a short revival of the *Carreira da Índia* with smaller ships. Notwithstanding the Dutch blockades of Goa, about the same number of ships returned as during the first two decades of the century, but in terms of volume the *Carreira* continued its decline.

Shipping losses

In the period 1581-1620 the average tonnage leaving Asia was higher than that coming in. An explanation may be that the smaller ships were kept in Asia or were declared unfit for further service and were replaced by bigger ones that were built in the yards of Goa. Comparing the average tonnage arriving in and leaving again from Asia during the 1620s, one may even imagine seeing the effect of the activities of viceroy Távora, who in 1612 began building large carracks instead of paying the debts of the pepper purchases of the past.[96]

With regard to the shipping losses, Duncan's data put an end to the myth that the large galleons were more prone to be taken by the English or Dutch privateers or to sink. The average size of the ships arriving in India was almost equal to that of the ships leaving Lisbon, even with the great losses of the years 1601-1610.

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[92] *Disney* 1978: 107-108.

[93] On 15-2-1633 the insurance of diamonds, rubies and other merchandise, loaded on the ship São Gonzalo returning from India, was subject of a notarial deed. [*GAA* Not.arch. 942, fo 148 Not. Daniel Bredan].

[94] *Disney* 1978: 74-100. After liquidation of the Portuguese Indian Company the *Carreira da Índia* was handed over to the *Conselho da Fazenda*.

[95] *Boyajian* 1993: 208-209. The fact that half empty carracks arrived in Lisbon has also been contributed to off-loading of part of the cargoes in Luanda and in the Azores.

[96] *Boyajian* 1993: 97-98.

Also on the return voyage the chances were apparently equal for the big and the small ships. It is however clear that during the 1590s the losses were highest on the return voyage, whereas during the first three decades of the seventeenth century most losses occurred on the outward voyage.

Western European historiography has frequently been tempted to attribute the losses on the *Carriera da India* to the English and Dutch aggression at sea. Even Duncan, notwithstanding the work he has done on the subject concluded: '*the violent challenge from Dutch and English forced the Portuguese to increase their shipping to India* (during the years 1591-1630), but with negative results: many shipwrecks, poor returns to Lisbon, recurrent fiscal losses and military defeats undermined confidence and discouraged further efforts'.[97] Thereby he contradicted his statement on a previous page that in eighty-two years of warfare (1587-1668), not only against the Dutch and the English but sometimes also against the Castilians, not more than twenty-three *Carreira* ships were lost by direct action from the enemy, i.e. not more than 3.8% of all voyages attempted.[98]

As a point of fact, as far as the *Carreira* was concerned, the effectiveness of war at sea was indeed very limited. The locations that offered the best chances of apprehending the carracks were off Lisbon or Goa, near the Portuguese watering station of St. Helena and, during a part of the year, at the northern exit of the Mozambique channel. A blockade of Lisbon was only possible with a strong fleet; Goa had the disadvantage that, until 1636, there was no refreshment station nearby and the Dutch captains were not keen on risking their cargoes when they passed St. Helena. Mozambique channel offered the best chances, but waiting for the Portuguese carracks to appear took a lot of patience.

During the years 1591-1600 the English captured or destroyed five *Carreira* ships,[99] the English and Dutch together three carracks during the 1600s and two during the 1610s, and finally, in 1622 the Dutch four carracks near or at the East African coast.[100]

The high shipping losses of the *Carreira da Índia* were to a large extent due to the most unfortunate choice of Goa or Cochin

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[97] *Duncan* 1986: 18. The italics are mine.

[98] *Duncan* 1986: 16. According to *Boyajian* 1993:153 the idea that the Dutch privateers were the main cause of damage to the Portuguese Asian trade would find its origin in a few spectacular losses such as the *Santa Catharina* in 1603 and the fact that in the beginning of the 17th century a few of the royal voyages from Malacca, amongst others to Pegu, Bengal and Banda were given up.

[99] *Duncan* 1986: 16. *Disney* 1978, 170 Appendix 3 gives only one carrack and it is quite remarkable that the numbers and names of ships mentioned by the two authors hardly ever cover each other. One explanation may be that Duncan's numbers include all ships participating in the *Carreira*, whereas Disney only refers to carracks.

[100] *Disney* 1978: Appendix 3, 170-175, J. Gentil da Silva, *Stratégie des affaires à Lisbonne entre 1595 et 1607. Lettres marchandes des Rodriguez d'Evora et Veiga* (Paris 1956) 78. See also *Dutch Pamphlets ca 1486-1648*, Knuttel Catalogue 1181 (Koninklijke Bibliotheek The Hague). António Lopes, Eduardo Frutuoso, Paulo Guinote, 'O movimento da Carreira da Índia nos secs.XVI-XVIII. Revisão e propostas' in *Mare Liberum* 4 (1992) 195-198, mention for the total period after 1587 the following losses due to privateering or piracy: on the outgoing voyage five by the English and seven by the Dutch, or about 1% of the total departures and 10% of all losses and, from the beginning of the sixteenth century, on the return voyage, fifteen cases by the English, Dutch, French, Arabs and Turks.

as endpoints of this shipping route. The time windows for arrivals and departures were too small and did not allow serious delays in the voyage, the purchase of pepper and other merchandise, the repair and loading of the ships or the assembling of the crews. Postponements of departures in connection with a real or imaginary attack or for whatever other reason, could lead to the loss of a whole year.

Before 1600 the big problem for the 'management' of the Portuguese shipping route was, no doubt, that the pepper contractors were not bearing the cost of the fleets and in many occasions cases one can suspect irresponsible behaviour, which was also prompted by fear. In the first place the fear that the right monsoon might be missed. This caused incomplete maintenance of the ships and wrong stowage. Secondly, the fear that the next fleet might be delayed, which caused overloading of ships on the return voyage. Thirdly the fear for the enemy. As one will see in chapter 5, the limited power of the *Estado da Índia* was spread widely and thinly. The Dutch could attack anywhere, from Mozambique to Macao and the king and his advisors never knew where they should concentrate their power. Numerous are the letters from Philip III[101], often sent overland and with small caravels via Hormuz, Mombassa and Mozambique to Goa, Ceylon and Malacca, warning for the arrival of Dutch fleets that were being built and calling for defence and action, without adding the necessary means.

The truth was that the build-up of the Dutch fleet in the years before 1636 was mainly directed against the Spanish in the Moluccas and the Philippines.[102] It was not so much the actual blockades, but rather the assumed presence of the ships of the enemy, in Europe as well as on the Atlantic and the Indian Ocean, that led the Portuguese to deviate from the normal routes and times of departure.

Summary

Until recently, most historians have regarded the *Carreira da Índia* as a royal enterprise with pepper and spices as the main cargo. For a long time, the fact that since the end of the 1580s there was a strong private interest has been overlooked or ignored.

As Boyajian demonstrated with some exaggeration, already in the 1590s the 'richest' part of the trade: spices, silks and cottons, indigo and diamonds, was in private hands. Even with the Portuguese India Company, privately owned merchandise represented a high proportion of the cargoes shipped from India. A considerable part of the private merchandise sent from Goa may have to be seen as the transfer of private capital back to the home country. It is mainly against this background that one can understand that notwithstanding diminishing returns on the pepper trade and after 1600, the unfavourable pepper allotment; the Portuguese merchants were still willing to support the *Carreira da Índia*.

The volume of the *Carreira* business, can be roughly estimated on the basis of very scarce administrative documents and contemporary private observations. This type of calculation should also take into account the price differences or ratios for the different categories of merchandise in Lisbon and Goa and the financial and

[101] See the *Documentos Remettidos* of the years 1611-1614.
[102] See chapter 7.

material losses incurred due to shipwrecks and cargoes lost. For the purpose of the present study it has been calculated that, as a rough and conservative estimate, during the 1590s the pepper bought in India for account of the *Casa da Índia* was worth about 44 tons of silver, whereas about 125 tons worth of silver was sent from Goa to Lisbon on private account.

A further analysis of its business aspects reveals that, during the 1590s, if there was anything 'royal' about the *Carreira da Índia* it was the outfitting of the fleet, the costs of which were borne by the *Casa da Índia*. Thus, the private trade was carried on the back of the pepper transports that took place on behalf of the latter institution. In exchange, the merchants paid the import duties, of which the collection on behalf of the *Casa da Índia* was done by a consortium in which they themselves participated.

A negative outlook on the *Carreira* existed mainly in administrative circles. Before the end of the 16th century the pepper trade dwindled to a relatively small flow. This was in particular due to the temporary set back of the 1590s, with a low number of ships sent from Lisbon and many shipping losses on the return, which no doubt were another reason for the pessimistic view the chronicle writers were taking at the time.

The fact that the contract for the navigation on the *Carreira da Índia* and the one for outfitting the vessels were not in one hand was a major factor in causing the high number of losses during the 1590s. The people responsible took risks they would otherwise probably not have taken. However, notwithstanding what has been said by eye witnesses about overloading and bad maintenance of the ships in Asia, during the period 1601-1630 far more ships were lost on the outward voyage than on the return voyage. Relatively few losses were caused by real direct contacts with the enemy.

At the end of the 1590s the squeeze by the *Casa da Índia* on the margins of the pepper distributors in Europe caused many of them, in particular in the northern German cities, to pull out. This opened a door for the pepper and spices from the new Dutch Indies companies.

During the first three decades of the seventeenth century more shipping volume was sent to India than ever before. Notwithstanding the heavy shipping losses and the lack of manpower which sometimes prevented the departure of the ships from Lisbon or Goa, the Portuguese merchants continued to participate. They were not only prepared to pay the freight charges and the custom duties, but also to provide additional loans and to pay the high prices for the pepper, which they sold in Antwerp. This supports the idea that for them the *Carreira* formed part of a bigger deal, which included the intra-Asia trade and the *asientos* in Antwerp.

The collapse of the *Carreira da Índia* during the 1630s was not a gradual development but came as a shock: the annual average number of ships and tonnage leaving Lisbon was about halved. This happened after 1629, when the New Christians of Lisbon received the right of access to the Habsburg empire and those who had participated in the *Carreira* consortium moved to Castile, but before the Dutch started their 'continuous' blockades of Goa in 1636. Not Dutch aggression but endogenous developments within the Iberian empire were the cause of this severe decline of the *Carreira da Índia*.

More or less simultaneous with their exodus from Portugal the New Christians were also offered the possibility to participate

in the Portuguese India Company, but they had lost interest in the pepper business and had little confidence that they would ever see their money back.

As if to demonstrate that the Portuguese *Restauração* was indeed a return to the past, the 1640s saw a moderate revival of the *Carreira da Índia*. The fact that the ships used were much smaller must have helped to get through the Dutch blockades of Goa. The number of ships that returned to Lisbon was almost the same as during the first two decades of the century. In terms of volume the *Carreira* continued its decline. The history of the *Carreira da Índia* is an interesting one but it is clearly due for a complete 'renovation', which appears now to be on its way.[103] It deserves just as much attention and detailed study as the VOC has received from Bruijn, Gaastra and Schöffer.[104]

The treasure of information that can be found in the Portuguese official public archives, should not only be combined with the information presently kept in the private files of researchers, but also with that from other European countries which once privateered on the Portuguese fleets between Europe and Asia. Rather than grouping the ships together in decades or even years and throwing the information on one heap, an analysis of the vicissitudes of each individual ship, in more detail than has been the case so far, should bring our knowledge and understanding further.

i....João Martins da Silva Marques, *Descobrimentos Portugueses* (Lisbon 1988) Vol.I 596-598, no.12 mentions such types as the *caravela*, the *barca*, the *barco*, the *nave*, the *baixel,* the *pinácia* and the *barco sáveiros*.

[103] *Lopes* 1992: 187-265 and *Aparício* 2000: 527-554.

[104] J.R. Bruijn, F.S. Gaastra, I. Schöffer, *Dutch-Asiatic shipping in the 17th and 18th centuries* (The Hague 1979-1987) 3 vols.