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A Case Study of the Early Newfoundland Trade

# Darlene Abreu-Ferreira

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# The English Mercantile Community in Seventeenth-Century Porto: A Case Study of the Early Newfoundland Trade

#### DARLENE ABREU-FERREIRA

To speak of a cod trade, not a cod fishery. Although Portuguese ships participated in the sixteenth-century fishery, seventeenth-century documents generally report cod brought into Portugal by foreign merchants. By the second half of the seventeenth century, the English outnumbered all other cod merchants combined. This, at least, was the case in Porto. Maritime traffic along Portugal's coast prior to the eighteenth century is difficult to gauge because few customs records survived, but there are clear indications that English ships in Portuguese harbours were a relatively common sight. <sup>1</sup>

Portuguese and non-Portuguese historians alike have debated the reasons for England's leading position in trade in early modern Portugal. Though there is little agreement among these studies, a common conclusion is that England received very favourable trading privileges from Portugal, by the treaty of 1642, for its support of Portuguese independence from Spain.<sup>2</sup> This commercial arrangement was ratified in 1654, at which time, some have argued, trade relations were made even less advantageous for the Portuguese.<sup>3</sup> Participants in this debate have, unfortunately, generally ignored the role of the cod trade in English-Portuguese commercial relations. Although cod from Newfoundland is often mentioned in passing, the focus has been on the trade in English textiles to Portugal and in Portuguese wine to England. These were of greater importance in terms of volume and value, but cod imports were nonetheless significant. The present paper uses previously unexamined archival sources to show that English merchants settled in Porto dominated the supply of cod to that Portuguese maritime city. The triangular trade among Eng-

land, Newfoundland, and Iberian or Mediterranean markets like Porto is well known, but the operation of such markets has yet to be fully documented.<sup>4</sup>

The geographical focus of this paper is the city of Porto in northern Portugal because only Porto has a relatively complete series of seventeenth-century port registries. Lisbon was undoubtedly a bigger market for cod imports from Newfoundland, but, unfortunately, none of its customs records for the early modern period survive. Porto's district archives, however, holds a collection that consists of the *Cabido* books for the *Redizima*, or church tithes. The *Cabido*, or chapter of the cathedral, had a vested interest in keeping good records on activities at the local harbour for it was entitled to a 1 percent tithe on all imports. Fortunately for the historian, the registries for 1639-1682 are nearly intact, providing important details on the volume of cod entering Porto during that period, as well as origin of ships, masters, and merchants. The *Cabido* series shows that there was a flourishing cod trade in seventeenth-century Porto, but it also shows that the trade was in foreign hands. The English and French are particularly visible in these records, with the former clearly dominating the trade.

The findings from Porto are in keeping with what is known about English participation in the cod trade in the early modern period. By the early seventeenth century, the English had an established cod fishery off Newfoundland, New England, and in the Gulf of Maine. Much of this fish was exported to Spain, Portugal, and Italy. Porto, with fewer than 20,000 people at the end of the seventeenth century, was a smaller market for Newfoundland cod than other major centers, yet the cargoes of cod that arrived at its harbour were significant, both for northern Portuguese markets and for the English merchants established there.

Porto's customs books for the second half of the seventeenth century confirm that after the 1650s the English dominated the cod trade. What is most revealing about this finding is the relative absence, from the *Redizima* books, of Portuguese names, even among shipmasters. The reasons for this absence are complex and difficult to ascertain, but these findings challenge some long-entrenched stereotypes about the Portuguese being great cod fishers in the early modern period. <sup>10</sup> Despite the contention by some Portuguese historians that Terra Nova was the Eden of the early Portuguese fisheries, evidence from Portugal's archives placing the Portuguese in Newfoundland waters in the sixteenth and seventeenth centuries is scant, though English sources provide some eyewitness reports about Portuguese participation in the early cod fishery. <sup>11</sup>

In a book written in 1599 and published in 1610, Duarte Nunez do Leão commented that Portugal had a rich and abundant national fishery, including fishing expeditions to Terra Nova, but the basis of his claim is difficult to confirm. <sup>12</sup> This is not to say that the Portuguese were uninterested in Newfoundland altogether. In Porto, for instance, the city council decreed in 1628 that anyone wishing to import cod had to have a licence, but that those going to Newfoundland could do so without one. <sup>13</sup> This might have been an attempt to encourage local initiative in the cod fish-

ery, but possibly the order referred to vessels going to Newfoundland to buy cod from the English.

How and why did the Portuguese become dependent on foreign cod suppliers? Historians have traditionally used Portugal's overseas expansion as an explanation for its dependency on food from abroad, especially grains from northern Europe. The argument has been made as well that Portugal's emphasis on overseas trade placed a drain on coastal communities and that Portugal's national fishery consequently declined in the first half of the seventeenth century. How widespread this problem was is not clear but Porto officials received a petition in 1624 lamenting the shortage of fishers in the vicinity, and the local Senate approved financial assistance to the district in question. It was perhaps at this point that the Portuguese became great fish importers — or even simply fish consumers, for the English settled in Porto did the importing.

Because no customs books survived in Porto for the first four decades of the seventeenth century, it is unclear when the English began to dominate Porto's cod trade. Some English sources show that by 1612 ships from Dartmouth were regularly trading Newfoundland cod in Portugal, but the number of ships that left English ports with cargoes of cod for Portugal, Madeira, and the Azores in the early seventeenth century was small compared to those that left for Spain and France. <sup>16</sup> There are a few references to foreign wholesale cod merchants in Porto's municipal records for the first half of the seventeenth century, including some Flemish, French, and English. 17 But, by far, the best sources for Newfoundland cod in Portuguese markets are Porto's custom's records, the Redizima series, for which a nearly chronologically-complete set of 51 volumes exists covering the period 1639-1682. 18 A total of 762 cod entries appear in these books, for a total of 506,808 quintals of cod in approximately 40 years. 19 The English carried at least 277,462 quintals of cod to Porto in those years, in 303 shipments. These figures are approximate, because nearly 200 entries lack adequate information on the masters' or merchants' nationality or origin. The English share of Porto's market was likely even larger than the recorded imports suggest.

Among the useful aspects of the *Redizima* records is that they provide the date of registration of incoming cargoes at Porto. Although the exact date a ship arrived with cod in Porto cannot be verified, the monthly distribution of cargoes registered in the books is suggestive. <sup>20</sup> As shown in Table 1, cod entries were most common in October and November. That was also the time when most English cargoes arrived in Porto, whereas their biggest competitor, the French, were in Porto primarily in the summer months. This was because the two rivals dealt in different kinds of cod-fish.

The time of year a shipment arrived was usually indicative of the kind of cod shipped. Porto's records show three main types of cod: *vento*, *pasta*, and *refugo*. *Refugo* was clearly a refuse or inferior quality, but we have no contemporary explanation of what *vento* or *pasta* cod were. The word *vento* means wind, and an early

Table 1. Monthly Volume of Recovered Cod Entries (in quintals) to Porto, 1639-1679

MONTH	SHIPMENTS	TOTAL	VENTO	PASTA
January	36	10,738	7,664	3,004
February	39	27,093	18,489	8,158
March	44	21,306	16,628	4,120
April	46	25,320	19,486	5,474
May	32	16,588	12,144	4,370
June	37	22,627	6,006	16,473
July	57	39,886	9,314	30,305
August	53	36,402	12,696	23,561
September	52	32,838	27,190	5,235
October	160	138,627	130,889	7,031
November	102	74,156	63,915	7,167
December	66	36,150	28,728	6,824
Unknown	47	25,080	22,683	2,386

Source: Arquivo Distrital do Porto, *Livro do Rendimento da Redizima*, Cabido Nos. 114-163 (1639-1679).

reference shows that when the Portuguese fished for cod in English waters in the fourteenth century, it was salted and dried *ao vento*. The *vento* name thus suggests that the cod in question was wind dried, or what was known as merchantable cod, while the *pasta* was probably wet or green cod. The *Cabido* records furnish no explanation about these categories. What is clear is that almost all *pasta* entering Porto arrived in French ships, while *vento* was brought in primarily by the English. Since the French are known to have produced *la morue verte*, it is fair to suppose that *pasta* was a green cod. Furthermore, *vento* cod was almost always more expensive than *pasta*, just as dry saltfish was worth more than wet salted fish.

In nearly every year for which a *Redizima* book survives, the volume of *vento* cod was greater than the *pasta* and *refugo* combined (Table 2). Of the 506,808 quintals of cod registered in Porto in the period under study, there were 375,830 quintals of *vento*, 124,106 quintals of *pasta*, and 6872 quintals of *refugo* and other "ruined" cod, or 74 percent, 25 percent, and 1 percent of the grand total, respectively. The English brought in 254,809 quintals of *vento*, and only 20,451 quintals of *pasta* (Table 3). The amount of refuse cod noted in the records is too small to warrant extensive analysis, as is the number of entries of *graixa* (likely train oil made from cod livers). Only two entries of oil were found connected to the English, including one dated 22 October 1658 for William Roe, from Plymouth and master of the vessel *Prudence*, who brought in two barrels of oil, of 16 *almudes* (about 32 liters).

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Table 2. Annual Volume of Cod (in quintals) Imported into Porto, 1639-1682

Table 2	2. Annual Vo	lume of Co	od (in quint	als) Imported	d into Porto,	1639-1682
YEAR	SHIPMENTS	TOTAL	VENTO	VENTO	PASTA	PASTA
				of TOTAL		of TOTAL
1639	14	9,847	6,758	69%	2,623	27%
1640	12	7,227	5,045	70%	1,881	26%
1641	9	6,292	1,999	32%	4,204	67%
1642	18	6,646	1,561	24%	5,057	76%
1643	9	8,216	4,987	61%	3,114	38%
1644	7	2,054	1,608	78%	420	20%
1645	10	5,864	4,487	77%	1,378	24%
1646	11	11,191	8,293	74%	2,667	24%
1647	30	20,536	10,542	51%	9,714	47%
1648	24	15,622	7,315	47%	8,307	53%
1649	16	22,493	14,740	66%	7,432	33%
1650	9	8,125	1,254	15%	6,871	85%
1651	30	31,497	15,711	50%	14,873	47%
1653	16	10,429	5,134	49%	4,998	48%
1654	31	32,829	23,105	70%	7,948	24%
1655	32	24,282	16,929	70%	5,795	24%
1656	24	12,705	11,665	92%	1,025	8%
1657	19	16,743	14,330	86%	2,414	14%
1658	26	23,536	21,988	93%	1,548	7%
1659	18	16,607	11,063	67%	5,544	33%
1660	6	5,401	4,827	89%	574	11%
1661	13	9,320	8,052	86%	1,268	14%
1663	8	6,997	6,587	94%	410	6%
1664	7	5,899	5,154	89%	282	5%
1666	6	1,323	958	72%	275	21%
1667	12	5,898	4,934	84%	964	16%
1669	38	20,865	16,710	80%	4,155	20%
1670	49	29,693	26,914	91%	2,779	9%
1674	16	12,930	12,850	99%	80	1%
1675	17	10,160	8,829	87%	1,331	13%
1676	17	11,534	10,247	89%	1,287	11%
1677	20	15,080	14,910	99%	170	1%
1678	14	10,830	10,382	96%	448	4%
1679	18	4,750	2,004	42%	2,747	58%
1680	36	19,475	19,198	99%	277	1%
1681	44	20,497	19,371	95%	1,127	5%
1682	29	13,504	11,545	85%	1,960	15%

Source: Arquivo Distrital do Porto, *Livro do Rendimento da Redizima*, Cabido Nos. 114-169 (1639-1682).

Table 3. Monthly Volume of Cod (in quintals) Brought into Porto by English Masters, 1639-1679

MONTH	SHIPMENTS	TOTAL	VENTO	PASTA
January	6	5,653	5,099	554
February	12	9,896	5,545	4086
March	17	11,808	7,027	3946
April	19	12,549	10,608	1680
May	7	7,470	7,470	0
June	5	2,034	1,987	0
July	11	6,699	6,364	335
August	8	9,750	9,596	154
September	30	22,420	20,099	2213
October	103	106,078	103,990	1680
November	45	46,082	42,107	3088
December	20	16,946	15,108	1732
Unknown	20	20,807	19,812	985

Source: Arquivo Distrital do Porto, *Livro do Rendimento da Redizima*, Cabido Nos. 114-163 (1639-1679).

The number of cod shipments arriving in Porto fluctuated not only on a monthly basis, but also from year to year, depending on such factors as weather conditions, fish harvests, war or piracy faced by the major suppliers. Though neutral carriers and convoyed fleets minimized losses at sea, hostilities between European nations often resulted in attacks on fishing vessels, which directly affected the supply of fish products. War also led to embargoes and impressment of fishing vessels, mariners, and fishers. In Porto, some of these variables were reflected by dramatic shifts in the number of ships entering with cod. In 1650, for example, the English carried only 1106 quintals of cod to Porto, compared to more than 10,000 quintals the previous year. Likewise in 1666, the year of the great London fire, and in the midst of hostilities with the Dutch, only one English vessel arrived in Porto with cod, carrying 361 quintals of *vento* and 275 quintals of *pasta*. The post of the previous of the post of the

The provenance of the English ships arriving with cod varied over time as well (Table 4). Plymouth, Topsham, and London were the three ports most commonly listed in the *Redizima* entries. The three combined for 152,131 quintals of cod registered in Porto during the period under study, or 55 percent of the known English volume, and 30 percent of all cod entering Porto. Each major English center had a part to play in Porto's cod trade at different times in the seventeenth century. Plymouth took the lead, with five entries in the 1640s, 17 entries in the 1650s, 12 in the 1660s, and 23 arrivals in the 1670s. <sup>28</sup> Plymouth's role declined in the 1680s, how-

ever, with only seven recorded appearances. This decline is partly explained by the absence of receipt documents in the *Cabido* collection after 1682. Significantly, Topsham masters numbered 22 in Porto in the 1680s, despite the incomplete documentation. Shipmasters from Topsham also entered Porto 25 times the previous decade, suggesting that Topsham dominated the trade in the latter part of the seventeenth century, while Plymouth had its heyday earlier. London's contribution to Porto's cod trade, on the other hand, was spread over the 40-year period, with a more gradual increase toward the end of the seventeenth century, with six cod shipments in the 1640s, nine in the 1650s, 11 in the 1660s, ten in the 1670s, and 14 in the 1680s. Finally, though Whitstable and Yarmouth only ranked fourth and fifth, respectively, among English towns supplying cod to Porto in the seventeenth century, masters from those two ports made a substantial contribution in the 1650s, with 19 cod shipments recorded from Whitstable, and ten from Yarmouth.

Table 4. Origins of English Shipmasters in Porto's Cod Trade, 1639-1679

ORIGIN	MASTERS	COD IMPORTED IN QUINTALS	SHARE OF IMPORTS
Barnstable	16	11,813	4%
Dartmouth	7	5,437	2%
London	51	50,094	18%
Plymouth	64	60,254	22%
Topsham	52	41,783	15%
Weymouth	7	2,608	1%
Whitstable	32	27,590	10%
Yarmouth	22	22,230	8%
Other/Unknown*	52	54,495	20%

Source: Arquivo Distrital do Porto, *Livro do Rendimento da Redizima*, Cabido Nos. 114-163 (1639-1679).

This trend compares relatively well with Keith Matthews' analysis of the fortunes of England's West Country ports in Newfoundland's cod fishery. He found Dartmouth and Plymouth heavily involved in the cod fishery early in the first half of the seventeenth century, each outfitting 80 ships annually in the 1630s, but declining toward the end of the seventeenth century. Dartmouth had a dominant role in the trade until the War of the Grand Alliance (1689-1697), but it is possible that

<sup>\*&</sup>quot;Other/Unknown" includes all shipments associated with English shipmasters for which no port of origin was specified, could not be deciphered, or the volumes were very small.

Dartmouth's connection to northern Portuguese ports was negligible in the second half of the seventeenth century. Matthews reported that a Dartmouth merchant house opened up in Viana do Castelo (north of Porto) in the 1650s, but that some West Country ports lost ground in the cod trade as London's, Topsham's, and Bideford's involvement increased, a trend that is also apparent in other documents found in Porto.<sup>29</sup>

In addition to the invaluable *Cabido* series of *Redizima* entries, Porto is unique among Portugal's northern coastal towns because its health inspection records, or *Visitas*, have survived from the late sixteenth and seventeenth centuries. <sup>30</sup> At a time when infectious disease was a serious threat to many communities, municipal authorities ordered inspections of incoming ships as a means of ensuring that nothing or no one posing a health risk would enter Porto's harbour. The health inspection books and the *Cabido* collection cover almost the same period, and consequently complement one another. Matching cod entries in the *Redizima* books with the *Visitas* can also broaden our understanding of Porto's cod trade. Church officials had a vested interest in recording volumes and market values, while health authorities were primarily concerned with the provenance of incoming vessels, so that details found in one source can sometimes fill a gap in the other.<sup>31</sup>

A case in point is the year 1672, for which no *Redizima* record survived. Thanks to the *Visitas* collection, we know that in 1672 Porto health inspectors visited 24 vessels carrying cod. Although the cod volume was unfortunately not noted, the sheer number of vessels recorded is some indication that a sizeable amount of cod entered Porto that year. Health inspection records serve to confirm some of the findings already discussed in connection to the *Cabido* series; they also enhance our understanding by providing some information about Porto's cod trade for the last two decades of the seventeenth century, for which church records are less common

Since neither Newfoundland nor fisheries in general were considered high risk sources of contagious diseases, cargoes of cod were rarely rejected by health inspectors. Cod shipments that did not arrive in Porto directly from Newfoundland, however, were subjected to more scrutiny, and spoiled cod was rejected regardless of place of origin. On 25 October 1660, for example, a load of cod was deemed rotten, and the master was told to throw it out to sea. On 8 November, officials ordered that an announcement be made throughout Porto that no one was to land rotten cod from ships off the coast, under penalty of a fine of 6000 *réis* or 20 days in jail, and that a search would take place of homes and shops suspected of having such cod. Another cargo of cod was rejected on 16 February 1695 when health officials found it unfit for public sale because it was totally "rotten and spoiled". 32

*Redizima* records, too, occasionally refer to a cod cargo classified as rotten and thus discarded at sea, though sometimes only a portion was rejected. On 24 May 1658, for instance, a vessel from London carrying 1960 quintals of *vento* had its load diminished by 100 quintals found to be rotten. Apparently officials recognized

varying degrees of rottenness. On 19 June 1653, for example, a cargo of *vento* cod was priced at 1300 *réis* per quintal, whereas in 26 June *pasta* was priced at 1540 *réis* per quintal. This shipment of *vento* had an unusually low value, as the scrivener noted, "for being awful and rotten" but not too rotten for resale. When a ship was lost at *Bonna* (Bayonne?), 45 quintals of cod were saved, but valued at a low price because it was wet. A similar devaluation probably took place with a cargo dated 10 April 1681, after Robert Scones from Topsham sank his vessel in the bar of Porto, from which 397 quintals of *vento* and four quintals of *pasta* were salvaged.<sup>33</sup>

The identification of unsavoury fish could raise diplomatic issues. On 5 July 1698, following a complaint from the public of a bad smell emanating from 49 barrels of herring and one of *pasta* cod, officials had a barrel of herring opened and had three herring cooked. The loin of the herring was found edible, while the rest of the fish was considered unfit to be sold to the public. Meanwhile, the barrel of *pasta* had 37 cod in it, all of which were deemed unfit and thrown into the river. The English consul petitioned city officials, arguing that the herring was acceptable in his homeland, and asking for permission to have it returned to England. This was allowed, as long as the departure took place in front of town officials. The English consul then complained that there was no ship to return to England, and requested a licence to take leave for another port, outside of Portugal. Permission was granted but the cargo was to be removed within 15 days. If the fish was found in Porto after the deadline, it was to be thrown into the river.<sup>34</sup>

It appears that when foreign vessels were inspected, the consulate representing the nation in question usually accompanied health officials aboard ship, suggesting that this was a serious business. Indeed, on 10 March 1684 a municipal order was passed in Porto requesting that health visits to foreign ships be conducted expeditiously. This might have been connected to fears of infection, but it was also probably due to concerns raised by foreign merchants about delays in unloading their cargoes. Some hints to that effect were found in Lisbon's municipal records. In 1695, for example, the crown legislated that ships loaded with cod from Newfoundland were not required to have health certificates, because there was no one in that region to supply masters with such documents, and these ships posed no danger if they were carrying only cod. The supplementation of the constant of the const

Out of approximately 2000 ships visited by Porto health inspectors from 1577 to 1698, at least 460 ships carried cod, though cargoes were often labelled merely as generic merchandise. This element of vagueness notwithstanding, the *Visitas* indicate that most cod entering Porto was brought in English ships. In fact, out of 460 cod entries identified, 331 cargoes were carried by English vessels. Furthermore, though health inspectors infrequently stipulated the type of cod, the *Visitas* show the English bringing more *vento* than *pasta*, a finding that correlates with the *Cabido* evidence. Similarly, the *Visitas* show the English arriving in Porto primarily in the fall and winter. The *Visitas* also provide some information unavailable from the *Redizima* records. The *Visitas* complement the *Redizima* by showing the

English presence in Porto continued well into the 1680s and 1690s. In fact, health inspection records are sorely lacking prior to the 1650s but are especially rich for the last three decades of the seventeenth century. They report 102 English cod shipments in the 1670s, 87 in the 1680s, and 106 in the 1690s (Table 5).<sup>37</sup>

Finally, the *Visitas* confirm that English cod almost always came directly from Newfoundland. Out of 320 English vessels inspected, for which a place of origin was noted, 260 or 81 percent came from Newfoundland. The next most common point of departure for English masters carrying cod to Porto was Plymouth, with 26 shipments noted; New England showed up nine times.

Complementary as the Visitas and Cabido series might be, not all entries in one series match those found in the other. Sometimes the *Redizima* has cod entries not found in the Visitas, and vice versa; dates, names, and place of origin do not always correspond; and often health inspectors did not properly identify the cargo.<sup>38</sup> In 1674 and 1675, for instance, Porto health officials inspected eight vessels carrying cod for which there are no corresponding entries in the Cabido books. It might be argued that the Cabido omission is a result of vessels not passing the health inspection and thus not allowed to enter the harbour. This is not likely, however, because the Visitas are passes given to shipmasters to show harbour officials. Furthermore, although two of the three vessels in question brought cod from Spanish ports, the third cargo came in an English ship directly from Terra Nova, an unlikely source of concern to health authorities. Another possibility is that once passing the health inspection, some vessels went on to neighbouring ports, such as Vila do Conde or Matosinhos. Either way, each set of documents provides a good sample of harbour activity in seventeenth-century Porto, and when entries found in both sources can be matched, some pertinent detail is sometimes provided in the Visitas collection that does not appear in the *Cabido* books.<sup>39</sup>

The most notable advantage of the *Cabido* series is that it provides unit prices for incoming cod shipments. <sup>40</sup> In Porto, cod was sold in *réis* per quintal at the wholesale level, regardless of category. <sup>41</sup> Price fluctuations were of course numerous, but they remained fairly steady until an increase in the early 1660s (Table 6). <sup>42</sup> In 1660 the average *vento* quintal cost 3027 *réis* (then approximately £1), <sup>43</sup> and the price average remained at 3000 *réis* or more per quintal for nearly 20 years. <sup>44</sup> Prices followed supply and demand. Thus, the 1660s was a decade when low volumes of cod entered Porto, with some of the highest average cod prices. In 1660 the price of *vento* cod ranged from 2800 to 3200 *réis* per quintal, but in 1661 it began at 4060 *réis* per quintal. <sup>45</sup> The price of *vento* skyrocketed in 1666 and 1667, when it reached more than 5000 *réis* per quintal. <sup>46</sup>

English ships made haste to arrive first in Newfoundland, to catch and prepare the fish, and to reach European markets, for prices could vary from day to day. Cargoes of ships arriving alone fetched higher prices than cargoes landed by competing ships at the same time. Ships reaching a market first got the best prices for their cargo, whereas by October and November prices dropped because most ships had

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Table 5. English Cod Vessels Importing Cod Inspected by Porto Health Officials, 1657-1698

YEAR	VESSELS
1657	7
1658	16
1659	10
1009	10
1660	3
1672	16
1673	5
1674	15
1675	12
1676	19
1677	8
1678	12
1679	15
1680	15
1681	23
1682	18
1684	9
1685	1
1686	21
1690	7
1691	12
1692	4
1693	15
1694	19
1695	4
1696	18
1697	19
1698	8

Source: J.A. Pinto Ferreira, *Visitas de Saúde às Embarcações Entradas na Barra do Douro nos Séculos XVI e XVII* (Porto, 1977), 86-415.

Table 6. Yearly Average Wholesale Cod Prices in *Réis* per Quintal: Porto, 1639-1679

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YEAR	VENTO	PASTA
1639	2,179	1,320
1640	2,280	1,400
1641	2,283	1,580
1642	1,900	1,196
1643	2,536	1,143
1644	2,734	1,200
1645	3,069	1,840
1646	2,691	1,624
1647	2,483	1,404
1648	2,490	1,064
1649	2,328	1,406
1650	2,360	1,387
1651	2,733	1,233
1653	2,778	1,609
1654	2,271	1,284
1655	2,195	0,964
1656	2,468	1,513
1657	2,449	1,450
1658	2,640	1,327
1659	2,805	1,301
1660	3,027	1,400
1661	2,919	1,311
1663	3,475	1,975
1664	2,900	1,650
1666	4,890	2,650
1667	4,306	2,160
1668	3,695	1,518
1669	3,423	1,161
1670	2,900	1,059
1674	3,441	0,913
1675	3,023	0,970
1676	2,653	0,952
1677	2,473	1,000
1678	3,568	1,280
1679	4,150	1,067

Source: Arquivo Distrital do Porto, *Livro do Rendimento da Redizima*, Cabido Nos. 114-163 (1639-1679).

arrived by then. <sup>47</sup> This trend is observable in the *Redizima* records as well. In general, prices for *pasta* were higher in early summer, and prices for *vento* were highest in early fall.

Porto cod prices do not deviate far from other cod prices elsewhere in western Europe in the seventeenth century, including those documented by Earl J. Hamilton for Valencia and Seville. Hamilton concluded that in general, prices for commodities, including animal products and fish, rose steadily from 1560 to 1650 in Spain. Fish prices rose more than other commodities between 1635 and 1650, a trend Hamilton blamed on conflicts with France (1635) and Portugal (1640) which may have disrupted the usual flow of fish supplies to some major Spanish ports. Fish prices were abnormally high at mid-century but they dropped more than the prices of most other commodities between 1652 and 1657. From 1658 to 1668, and again in 1679, fish prices rose dramatically, only to fall again between 1680 and 1683. The price of fish, like that of other imported commodities, was vulnerable to monetary fluctuations. 48

Undoubtedly English merchants settled in Porto were concerned with these price fluctuations, but little is known about the individuals in their community. A report written in 1671 by a Florentine banker residing in Lisbon noted that there were nine English merchant houses in Porto, compared to one French and three Flemish and German [amburghesi]. An English Factory House was built in the eighteenth century in what was called the Rua Nova dos Ingleses, but already in the seventeenth century the English had their own vice-consul and interpreter, Edward Murcot. His appointment had been contested by the chief consul in Lisbon, Thomas Maynard, but the Porto English community often ignored directions from the capital. On the capital of the contested by the chief consul in Lisbon, Thomas Maynard, but the Porto English community often ignored directions from the capital.

The English community also had the occasional confrontation with Porto officials, especially in connection with religious practices. <sup>51</sup> Referred to as "Hereticks and Doggs" by some Portuguese, English merchants refused to comply with a tax imposed on them in 1671 to support the annual Corpus Christi procession, only to have one of their houses invaded by Porto officials from which cloth was taken and auctioned off to cover the tax. Nevertheless, some English merchants did well in Porto: when Thomas Manning died in 1662, for instance, he left an estate worth 50,000 crowns. <sup>52</sup> He made his fortune in a variety of commercial transactions, including imports of English cloth and exports of port wine, but his name also shows up regularly in the *Redizima* books' cod entries.

We know that large quantities of cod sometimes arrived in Porto, and that at times prices rose to 5300 *réis* per quintal, but what that meant for the individual merchant or the local consumer is difficult to determine. Because the only prices quoted in the *Redizima* collection are wholesale, it is impossible to gauge the profits Porto's English community enjoyed from the cod trade on the basis of this source. What is certain is that Porto's cod trade was not in Portuguese hands, at least not at the wholesale level.

Both the *Visitas* and *Redizima* documents confirm that the role of Portuguese shipmasters in the cod trade was minimal. In the health inspection records, only 15 references to Portuguese merchants and/or masters carrying cod were found for the seventeenth century. The indications suggest, in fact, that by the second half of the seventeenth century few Portuguese ships ventured to Newfoundland. If they did, there is no evidence that they brought their catch directly to Porto. The few references found in the *Visitas* to Portuguese masters bringing cod to Porto indicate that they got their cargo from Galician or French ports, or from other parts of Portugal — cargoes that were most likely brought into Portugal in foreign bottoms.

Even fewer references were found in the *Cabido* books to Portuguese ships or masters engaged in the cod trade. The first such entry is dated 10 May 1656, at which time, Francisco Gomes, from Cascais, came in with his caravel *Nossa Senhora da Piedade*, with 525 quintals of cod from Lisbon. Another two Portuguese masters from Cascais brought cod to Porto from Lisbon in 1657, one carrying 800 and the other 540 quintals of *vento*. Cascais appears to have been the place of origin for most Portuguese masters transporting cod along Portuguese coasts, with another four such entries located in the 1658 registry. None of these cargoes was charged any duties because each master had papers showing prior payment in Lisbon. In one case, the master had papers from officials in Vila do Conde and in Lisbon. The records state that the shipment came from Lisbon, but the caravel had already been to Vila do Conde as well, which is north of Porto. In another case, only half the cargo was subject to duties in Porto because the master had paid duties for the other half in Faro, a port in the Algarve in southern Portugal. 53

Portuguese masters and vessels were absent from the *Cabido* records for the next 15 years. Not until 1674 did they make another appearance, though Cascais/Lisbon was no longer their home base; one was from Masarellos, one from Porto, and another from Viana, all in northern Portugal. Unfortunately, the records do not indicate where the Portuguese masters got their cod, and often they brought in more than one type of fish. The master from Porto, for example, carried *vento* as well as *pescados* (generic fish) and herring, which suggests that he did not arrive directly from the cod fishery. Furthermore, the master from Viana, António Fernandez Sisto, also brought *vento* to Porto in 1676 and 1678, and in both cases the cod came from La Rochelle. <sup>54</sup> The same might have been true of the 1674 shipment.

In all, only 12 entries were found in the *Redizima* collection showing Portuguese ships bringing cod to Porto, and none of it directly from Terra Nova. The evidence points to a redistribution of cod likely imported by English ships, and this redistribution included Brazilian markets in which Portuguese merchants and masters enjoyed a near monopoly. Indeed, the 1642 and 1654 peace treaties between Portugal and England, which opened Portuguese overseas posts to English merchants, specifically reserved fish exports to Brazil to the Portuguese Brazil Company.<sup>55</sup>

In addition to the receipt books, the *Cabido* collection contains several volumes that deal with the dispatch of merchandise, and these are particularly useful for the latter part of the seventeenth century. The *Despacho* provides less detail than the *Redizima*, for the former merely notes the merchant's name and merchandise leaving Porto, with confusing information on the volume, and little indication on the value of the cargo. Still, for purposes of this study, *Despacho* books offer some insight into the export of cod from Newfoundland out of Porto's harbour, to Rio de Janeiro, Pernambuco, and Bahia in Brazil.

The collection of *Despacho* books has large gaps, and not all existing volumes show cod shipments to Brazil.<sup>56</sup> It is also difficult to quantify the volume of cod Porto exported to Brazil because of the variation in measuring units used at the time.<sup>57</sup> Toward the end of the seventeenth century officials were more prone to indicate the volume in quintals, but in the earlier period cod shipments were noted in *coartyrolas* or *coartollas*, *barris*, *pipas*, and a few other obscure units. Sometimes officials noted the equivalency in quintals, but there are too many discrepancies to determine exact volumes. For example, one shipment of 20 *pipas* weighed 90 quintals, while another shipment, also of 20 *pipas*, weighed 75 quintals. Clearly the weight depended on the type of cod (seldom stated) and the amount of cod in each *pipa* (often not mentioned). Likewise, the measure in quintals that is sometimes provided for a *coartolla* ranges from two to four.<sup>58</sup> Occasionally the cod volume is even more difficult to determine because the measuring unit is not specified at all, except for *alguns coartos de bacalhau*, or just *bacalhau*.<sup>59</sup>

Given the above-noted problems, and the sparsity of *Despacho* books, it is difficult to arrive at definitive conclusions about cod exports to Brazil. The best that can be said about this branch of Porto's cod trade is that toward the end of the seventeenth century cod exports to Brazilian markets appear to have increased steadily. Few foreign names are found in these records, either as shipmasters or as merchants. Samuel Palmer was one of the few English merchants registered with cod shipments for Pernambuco, though he primarily dealt with wine, rosin, grain, and other merchandise.<sup>60</sup>

In Porto itself, however, the English held such a key position that church officials were obliged to adopt a separate accounting system for English shipments. Beginning with a cod entry on 23 October 1655, notes were added to the margin stating that henceforth half the *dizima* or tithe amount was recorded in the *Cabido* book, and the other half went in the *Livro Novo*. No reasons were provided for this change, nor any indication of the whereabouts of this *Livro Novo*, or new book. Later in the same volume, a note was made that *a metade vaj no livro dos ingreces*—that is, half goes in the new English book. Indeed, the new bookkeeping system applied to English fish cargoes only. Whether this restructuring was due to English intervention, church reorganization, or whether it was mandated by the city or crown is difficult to tell. Nor is it clear why after almost a decade, record keepers dropped this system as abruptly and as mysteriously as it had started. What is clear

is that the *Livro Novo* was introduced at a time when the volume of English cod in Porto was at its highest and ended when English cargoes dropped dramatically, or, to put it more accurately, when the gaps in the *Cabido* series become more pronounced.

English merchants began settling in Porto sometime in the first half of the seventeenth century, and this mercantile community grew steadily well into the eighteenth. This, at least, is what records kept by the Holy Office of the Inquisition suggest. These were not economic records, for the Inquisition officials were more concerned with heresy, but enough can be extracted from the series that survives, 1733-1743 and 1764-1785, to show that English-speaking shipmasters were frequent vistors to Porto's harbour. Of the 6346 ships recorded in the Inquisition books, 4235 were noted as ingles, with 3579 from English ports, 294 Scottish, 288 Irish, and 74 American. The provenance of these vessels indicates that cod from Newfoundland was often among the cargoes brought into Porto. The two locations mentioned most often as places of origin for the English were London and Terra Nova, with 901 and 658 ships registered, respectively. The next most common vessel origins noted in these records as ingles were Dublin with 189 vessels, North Carolina with 166, Southampton with 145, Topsham with 139, Hull with 130, Bristol with 114, Dartmouth with 111, Newcastle with 107, and Liverpool with 105.63 Unfortunately, because cargoes were seldom identified, the Inquisition records cannot be used to determine the volume of cod brought into Porto in the eighteenth

What impact did the English presence have on Porto? How did the Portuguese feel about the English dominance of the local wholesale trade in cod? Unfortunately little is known about the reaction of Porto residents toward the English interlopers, though the foreign control of an economic sector would not likely go unnoticed. The Portuguese-Newfoundland connection started possibly as early as 1500-1501, when the Corte Real brothers first explored the North American Atlantic coast, and ended officially in 1986 when the last Portuguese fishing vessel left Newfoundland waters. Ties between the two regions over these five centuries were, however, sporadic and ambivalent. In the second half of the seventeenth century, what Newfoundland and Portugal had in common was a cod trade controlled by the English.

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#### Notes

<sup>1</sup>Virginia Rau, "Sources pour l'étude de l'économie maritime portugaise", in Michel Mollat du Jourdin, ed., *Les sources de l'histoire maritime en Europe, du Moyen Age au XVIIIe siècle: actes du quatrième colloque international d'histoire maritime* (Paris, 1962).

<sup>2</sup>Henk Ligthart and Henk Reitsma, "Portugal's semi-peripheral middleman role in its relations with England, 1640-1760", *Political Geography Quarterly* 7 (4) (1988), 353-362; H.E.S Fisher, "Lisbon, its English merchant community and the Mediterranean in the 18th century", in P.L. Cottrell and D.H. Aldcroft, eds., *Shipping, Trade and Commerce. Essays in memory of Ralph Davis* (Leicester, 1981); A.H. Oliveira Marques, *História de Portugal desde os tempos mais antigos até ao governo do Sr. Pinheiro de Azevedo*, vol. 1 (2nd ed., Lisbon, 1978); Armando Castro, *A Dominação Inglesa em Portugal* (Porto, 1974); Victor Morales Lezcano, *Relaciones Mercantiles entre Inglaterra y los Archipielagos del Atlántico Ibérico (1503-1783): su Estructura y su Historia* (Tenerife, 1970); S. Sideri, *Trade and Power: Informal Colonialism in Anglo-Portuguese Relations* (Rotterdam, 1970); V.M. Shillington and A.B. Wallis Chapman, *The Commercial Relations of England and Portugal* (1907, rep. New York, 1970).

<sup>3</sup>More recent work has questioned this traditional thesis. See L.M.E. Shaw, *The Anglo-Portuguese Alliance and the English Merchants in Portugal*, 1654-1810 (Aldershot, Hants., and Brookfield, VT, 1998).

<sup>4</sup>An exception to this is the case of Viana do Castelo, north of Porto, where some good work has been done on its role with the Newfoundland trade in the sixteenth century. See Manuel António Fernandes Moreira, "O Porto de Viana do Castelo e as Navegações para o Noroeste Atlântico", in *Viana*—o Mar e o Porto (contributos para o estudo da sua História) (Viana do Castelo, 1987).

<sup>5</sup>I am indebted to the staff at the Arquivo Distrital do Porto (A.D.P.) for their generous assistance during my numerous visits to the archive, and especially to the archivist Silvestre Lacerda who acquainted me with the intricacies of the *Cabido* collection, *Livro do Rendimento da Redizima dalfândega desta cidade do Porto que pertence a Igreja*, Nos. 107-195 (1574-1748).

<sup>6</sup>The role of the French in Porto's cod trade will be dealt with in a separate study currently underway.

<sup>7</sup>Harold Innis, *The Cod Fisheries: The History of an International Economy* (rev. ed., Toronto, 1954), 52, 70-74, 118.

<sup>8</sup>Constantino Botelho de Lacerda Lobo, "Memória sobre a Decadência das Pescarias de Portugal", in José Luis Cardoso, ed., *Memórias Econômicas*, vol. 4 (1812, rep. Lisbon, 1991), 245-246.

<sup>9</sup>Population figures for this period are not always accurate, but estimates for Porto indicate that its population was 15,919 in 1688. See Francisco Ribeiro da Silva, *O Porto e o seu Termo (1580-1640)*. *Os Homens, as Instituições e o Poder* (Porto, 1988), vol. 1, 96-98.

<sup>10</sup>The legend of the Portuguese in Newfoundland waters can be found in history and popular texts alike. For a recent example, see Mark Kurlansky, *Cod: A Biography of the Fish that Changed the World* (Toronto, 1997), 50-51.

<sup>11</sup>For a recent argument in favour of a prominent Portuguese presence in the early Newfoundland fishery, see Manuel António Fernandes Moreira, *Os Mareantes de Viana e a Construção da Atlantidade* (Viana do Castelo, 1995), 297. For a critical review of this

theme, see Darlene Abreu-Ferreira, "Terra Nova through the Iberian Looking Glass: The Portuguese-Newfoundland Cod Fishery in the Sixteenth Century", *The Canadian Historical Review* 79 (1) (1998), 100-115.

<sup>12</sup>Duarte Nunez do Leão, *Descripção do Reino de Portugal* (1610, rep. Lisbon, 1785), 132.

<sup>13</sup>Arquivo Histórico Municipal do Porto (A.H.M.P.), *Livro das Vereações (1625-1628)*, No. 46, f.292v, f.294v, f.295.

<sup>14</sup>Among the most noted, see Carl A. Hanson, *Economy and Society in Baroque Portugal*, 1668-1703 (Minneapolis, 1981), 201-206; Vitorino Magalhães Godinho, *Os Descobrimentos e a Economia Mundial* (2nd ed., Lisbon, 1991), vol. 4, 14-17, 219; Frédéric Mauro, *Le Portugal et l'Atlantique au XVIIe Siècle (1570-1670)* (Paris, 1960), 68, 282-84, 435, 510.

<sup>15</sup>A.H.M.P., *Livro das Vereações (1623)*, No. 45, f.42, as cited in Ribeiro da Silva, *O Porto e o seu Termo*, vol. 1, 102, 188. The reason given for the absence of fishers was that many had been captured by pirates.

<sup>16</sup>Keith Matthews, "A History of the West of England-Newfoundland Fishery", unpub. D.Phil. thesis (Oxford, 1968), 83; Gillian T. Cell, *English Enterprise in Newfoundland, 1577-1660* (Toronto, 1969), 133-148. These findings could not be confirmed with Portuguese sources.

<sup>17</sup>A.H.M.P., *Livro das Vereações (1594)*, No. 32, f.256v; No. 33 (1597), f.146; No. 34 (1598), f.12; No. 37 (1606), f.20v; No. 39 (1610-1612), No. 39, f.236v-f.237; No. 40 (1613-1614), f.56v; No. 44 (1622), f.42-f.42v; No. 46 (1626-1628), f.121v, f.136; No. 46 (1628), f.292v; No. 47 (1634), f.86-f.86v, f.89v; No. 48 (1638-1640), f.16-f.16v, f.19-f.20, f.70v-f.71, f.98v, f.125-f.126.

<sup>18</sup>No book survived for some years, while for other years two volumes exist, one for entries and another for dispatch.

<sup>19</sup>A Portuguese quintal was approximately 128 pounds, or 128 arráteis, for an arrátel was about one pound. T. Bentley Duncan, Atlantic Islands: Madeira, the Azores and the Cape Verdes in Seventeenth-Century Commerce and Navigation (Chicago, 1972), 259; Virgínia Rau, "Achegas para o Estudo da Construção Naval durante os Séculos XVII e XVIII na Ribeira do Ouro - Porto", in Memórias (Lisbon, 1971), 71; Mauro, Le Portugal et l'Atlantique, Ivi-Iviii.

<sup>20</sup>The dates provided in the *Redizima* books must be viewed with caution. For instance, the custom's volume for 1654 has 20 pages of fish entries, dated chronologically from January to November. This is followed by a few more entries, with one dated 28 July, followed by 10 March, followed by several entries with no date at all. A.D.P., *Livro do Rendimento da Redizima ... 1654*, Cabido No. 134, f.140-f.161v.

<sup>21</sup>José Montalvão Machado, "Alimentos Antigos e Alimentos Novos", *Anais — Academia Portuguesa da História*, II Série, Vol. 29 (Lisbon, 1984), 514. Daniel Vickers, "A knowen and staple commoditie': Codfish Prices in Essex County, Massachusetts, 1640-1775", *Essex Institute Historical Collections* 124 (3) (1988), 188.

<sup>22</sup>Charles de la Morandière, *Histoire de la pêche française de la morue dans l'Amérique septentrionale (des origines à 1789)*, vol. 1 (Paris, 1962), 247.

<sup>23</sup>Only two exceptions were found to this trend. In April 1641, an entire cargo of *vento* and *pasta* was priced at 2400 *réis* per quintal; and on 6 March 1649, one *vento* cargo was valued at 1600 *réis* per quintal, but in early June a load of *pasta* cost 2020 *réis* per quintal. A.D.P.,

*Livro do Rendimento da Redizima ... 1641*, Cabido No. 116, f.141, and Cabido No. 126 (1649), f.140, f.142. Either the *vento* was of an inferior quality, or the *pasta* price reflects fluctuations at different times of the year.

<sup>24</sup>These amounts do not include the approximately 71,949 quintals of cod, most of it *vento*, recorded without proper identification of masters and/or merchants.

<sup>25</sup>A.D.P., *Livro do Rendimento da Redízima* ... *1658*, Cabido No. 142, f.147v. See also Cabido No. 143 (1659), f.141. An *almude* was originally a liquid measure.

<sup>26</sup>A.D.P., *Livro do Rendimento da Redizima ... 1649*, Cabido No. 126, f.140-f.148; Cabido No. 128 (1650), f.141v-f.144v.

<sup>27</sup>A.D.P., *Livro do Rendimento da Redizima* ... 1666, Cabido No. 149, f.100-f.100v. English protectionist navigation acts, aimed at promoting national shipping and curtailing Dutch supremacy in the carrying trade, were largely responsible for the First Anglo-Dutch War (1652-54), Second Anglo-Dutch War (1664-67), and Third Anglo-Dutch War (1672-78).

<sup>28</sup>Of the 42 entries found connected to the English but for which no master origin was provided, 23 were recorded in the 1640s.

<sup>29</sup>Matthews, "Newfoundland Fisheries", 60-62, 73, 265. See also W.B. Stephens, "The West-Country Ports and the Struggle for the Newfoundland Fisheries in the Seventeenth Century", *Report and Transactions of the Devonshire Association* 88 (1956), 90-101. I was unable to confirm whether or not an English merchant house was established in Viana do Castelo in the mid-seventeenth century.

<sup>30</sup>These archival records were transcribed and published in their entirety by J.A. Pinto Ferreira, *Visitas de Saúde às Embarcações Entradas na Barra do Douro nos Séculos XVI e XVII* (Porto, 1977).

<sup>31</sup>Both collections begin in the 1570s but provide little information for the sixteenth century, and both have significant gaps in their chronology. The *Redizima* unit has a hiatus from 1591 to 1639, while the *Visitas* collection has nothing from 1600 to 1657. Furthermore, the *Cabido* series does not have books for 1662, 1665, 1671, and 1672; the same is true for the *Visitas*, except for 1672.

<sup>32</sup>Pinto Ferreira, *Visitas de Saúde*, 43, 74. The provenance of this cod was not stipulated.

<sup>33</sup>See, for example, A.D.P., *Livro do Rendimento da Redizima ... 1639*, Cabido No. 114 (1639), f.140-f.141; Cabido No. 115 (1640), f.140v; Cabido No. 132 (1653), f.144; Cabido No. 138 (1656), f.151-151v; Cabido No. 142 (1658), f.143v; Cabido No. 143 (1659), f.141; Cabido No. 157 (1674), f.91; Cabido No. 159 (1676), f.109-f.109v; Cabido No. 161 (1677), f.140; Cabido No. 168 (1681), f.101v.

<sup>34</sup>Pinto Ferreira, *Visitas de Saúde*, 78-79.

<sup>35</sup>On 12 June 1677 Porto health officials quarantined the passengers of the *Fortune* from London because the ship had had contact with the Moors. The English consul was not present at the time but was notified immediately. Pinto Ferreira, *Visitas de Saúde*, 43, 59-60.

<sup>36</sup>Eduardo Freire de Oliveira, ed., *Elementos para a História do Município de Lisboa* (Lisbon, 1882-1911), vol. 10, 427; vol. 15, 215-217, 293.

<sup>37</sup>The *Visitas* collection has numerous gaps for the 1680s, and also for the 1660s with nothing surviving from 1661 to 1672.

<sup>38</sup>For a discussion of the problems with the *Visitas* collection and with determining the provenance of a ship or cargo, see João José Alves Dias, "Subsídios para o Estudo do

Movimento e Comércio da Barra do Douro no Século XVII", in *Estudos de História de Portugal*, Vol. 2 (Lisbon, 1983), 162 n.12.

<sup>39</sup>On 7 May 1674, for instance, health officials inspected the *Alevina* of Manuel Fernandez Nicoloao that came in with cod and other fish. Health inspectors pointed out that the *Alevina* was brought in by the English master Giraldo Estol because Manuel Fernandez Nicoloao was arrested in Lisbon, yet no such information was noted in the *Cabido* books. For other examples of similar discrepancies, see Pinto Ferreira, *Visitas de Saúde*, 116-117, 154-155, 158-159, 162-163, 168-169, 172-189; and A.D.P., *Livro do Rendimento da Redizima* ... 1658, Cabido No. 142, f.143; Cabido No. 158 (1675), f.100-f.104; Cabido No. 159 (1676), f.109v-f.111v.

<sup>40</sup>It should be noted that the *Cabido* record keeper was merely concerned with the unit price for the *dizima* amount of cod — that is, the portion set aside for the crown and church, and which was auctioned off to the highest bidder. It is not clear whether this same unit price was applicable to the remainder of the cod shipment, though it probably was.

<sup>41</sup>Only a few exceptions were found where the monetary system applied was the *cruzado* and the cargo of cod was noted in barrels or bundles. See A.D.P., *Livro do Rendimento da Redizima* ... *1643*, Cabido No. 118, f.143v-f.144; Cabido No. 122 (1647), f.149; Cabido No. 124 (1648), f.141; Cabido No. 135 (1655), f.153v.

<sup>42</sup>Unfortunately, because very few *Cabido* port entry books survived for the 1680s and 1690s, and the *Visitas* collection provides no price units for registered cargo, cod prices for the last two decades of the seventeenth century cannot be determined.

<sup>43</sup>The *real* (*réis* in plural) was an extremely small unit, even in the early modern period. In 1700, for example, the *real* was only equal to approximately 0.081 of an English penny. The *cruzado* was approximately 400 *réis*, and up to about 1640 the *cruzado* was roughly equivalent to one English crown (i.e. five shillings). Estimates for the seventeenth century are as follows: £1 in 1601-41 = 1,482 *réis*; 1641-43 = 1,800 *réis*; 1643-63 = 2,117 *réis*; 1688-1734 = 3,176 *réis*. For a more elaborate discussion of the Portuguese monetary system in the early modern period, see Mauro, *Le Portugal et l'Atlantique*, 395-432; Duncan, *Atlantic Islands*, 263-266; John J. McCusker, *Money and Exchange in Europe and America*, 1600-1775: A Handbook (Chapel Hill, 1978), 107-113.

<sup>44</sup>Between 1660 and 1679 there is a gap of six years for which no *Redizima* record exists. Furthermore, large volumes of *vento* cod came into Porto between 1680 and 1682, with 19,198 quintals, 19,371 quintals, and 11,545 quintals respectively, yet no prices were recorded with these entries.

<sup>45</sup>A.D.P., *Livro do Rendimento da Redízima ... 1661*, Cabido No. 145, f.143v.

<sup>46</sup>A.D.P., *Livro do Rendimento da Redizima ... 1666*, Cabido No. 149, f.100, f.104v; Cabido No. 150 (1667), f.100-f.105.

<sup>47</sup>Matthews, "Newfoundland Fisheries", 22; de la Morandière, *Histoire de la pêche française*, 277.

<sup>48</sup>Earl J. Hamilton, *American Treasure and the Price Revolution in Spain, 1501-1650* (1934, rep. New York, 1965), 230; and *War and Prices in Spain, 1651-1800* (1947, rep. New York, 1969), 175-177.

<sup>49</sup>Guido Battelli, "O Comércio dos portos de Lisboa, Setúbal e Pôrto nos fins do século XVII, conforme um documento italiano da mesma época", *Boletim da Sociedade de Geographia de Lisboa*, série 53, nos. 9/10 (September/October 1935), 337-345.

<sup>50</sup>Shaw, *The Anglo-Portuguese Alliance*, 53.

<sup>51</sup>For an overview of the difficulties faced by some English merchants in Portugal, see Shaw, *The Anglo-Portuguese Alliance*, 84-85, 95-97, 102, and 174-178.

<sup>52</sup>Elaine Sanceau, *The British Factory, Oporto* (Porto, 1970), 23-35; John Delaforce, *The Factory House at Oporto: Its Historic Role in the Port Wine Trade* (1979, rep. Bromley, Kent, 1990), 13-17.

<sup>53</sup>A.D.P., *Livro do Rendimento da Redizima ... 1656*, Cabido No. 138, f.142; Cabido No. 140 (1657), f.141; Cabido No. 142 (1658), f.140, f.142v, f.144v.

<sup>54</sup>A.D.P., *Livro do Rendimento da Redízima ... 1674*, Cabido No. 157, f.90, f.91; Cabido No. 159, (1676), f.109v; Cabido No. 162 (1678), f.111.

<sup>55</sup>A few references were found to a *Companhia Geral*, or General Company, in connection with cod exports to Brazil. A.D.P., *Livro do Rendimento da Redizima ... 1652*, Cabido No. 131, f.47-f.48v; Cabido No. 133 (1653), f.41, f.45, f.46.

<sup>56</sup>Despacho books for 1650, 1656, 1657, 1667, 1668, 1673, 1676, and 1690 show no references to cod, though my search was cursory due to time constraints. The few existing volumes for the eighteenth century (1713-1798) reveal nothing on cod exports.

<sup>57</sup>For examples of unclear measuring units noted in the registries of cod exports to Brazil, see A.D.P., *Livro do Despacho* ... *147*, Cabido No. 123, f.142; Cabido No. 125 (1648), f.61, f.72v-f.77v; Cabido No. 130 (1652), f.40v, f.43, f.44; Cabido No. 166 (1681), f.42, f.44, f.47, f.64, f.82; Cabido No. 170 (1682), f.170, f.198v; Cabido No. 171 (1683), f.100v, f.105v, f.117v, f.137v, f.145v, f.153v, f.160, f.175; Cabido No. 174 (1687), f.61v, f.78, f.85, f.115, f.195, f.196; Cabido No. 175 (1688), f.174; Cabido No. 179 (1691), f.106.

<sup>58</sup>A.D.P., *Livro do Rendimento da Redízima* ... *1648*, Cabido No. 125, f.73v, f.77v; and Cabido No. 175 (1688), f.174.

<sup>59</sup>Some *coartos* of cod, or just cod. A.D.P., *Livro do Rendimento da Redízima ... 1647*, Cabido No. 123, f.142.

<sup>60</sup>A.D.P., *Livro do Despacho ... 1696*, Cabido No. 184, f.123-f.126v; Cabido No. 185 (1699), f.91v, f.92, f.99, f.100v, f.122, f.134, f.199v.

<sup>61</sup>On 11 March 1659 an English vessel from Plymouth brought two separate cargoes of *pasta* cod, one for a Portuguese merchant, and another for an English merchant; only the latter was halved. A.D.P., *Livro do Rendimento da Redizima* ... 1655, Cabido No. 135, f.144v, f.148v, f.153; Cabido No. 143 (1659), f.141.

<sup>62</sup>This splitting was noted in the *Cabido* books from 1655 to 1664. No volume for 1665 exists, and from 1666 forward, all cod entries were treated equally, with everything recorded in the *Cabido Redizima* series.

<sup>63</sup>Virginia Rau, "O Movimento da Barra do Douro Durante o Século XVIII: Uma Interpretação", *Boletim Cultural da Câmara Municipal do Porto* 21 (1958), 5-27.