



Growing labour demand of a starting company.

**The Dutch maritime labour market and the emergence of the Dutch East
India Company (1602-1622).**

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OSIII : The history of the Dutch East India Company

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10176 words.

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Introduction

In the 16th century the Dutch Republic the maritime labour market was extraordinarily large for European standards. In almost no European country before 1700 did the demand for sailors exceed 50,000 men. In the Netherlands the demand surpassed 30,000. However when looking at population levels, the Republic stood out. Large countries like France, with twenty million inhabitants and medium-rank countries, like Great Britain and Spain with 10 million easily outnumbered the Dutch republic with only 2 million inhabitants by the late seventeenth century. This would mean that maritime labourers in France would represent less than one per cent of the total work force and roughly two per cent in Great Britain and Spain. The Dutch Republic clearly stands out with around ten per cent.¹ These numbers make it clear that the Dutch maritime sector had a much smaller national area of recruitment.

This means that the Dutch East India Company (V.O.C.), when it was established in 1602, had to fit itself into an already large labour market. Having to attract considerable amounts of employees in a market where labour demand is high the V.O.C. had to find a way to satisfy their labour demand.

Concerning the impact of the V.O.C. on the Dutch economy, and more precisely the maritime economy, most academic work focusses on the eighteenth century. During this period, the V.O.C. had an important role in upholding the level of labour demand while other sectors shrank. However, despite the abundance of literature on the effects of the V.O.C. on the labour market in this later period, the literature concerning the role of the V.O.C. in the initial phase of its existence remains silent. This is quite remarkable because it is exactly during this phase that the V.O.C. had to find a place for itself into this large labour market and secure their future. This paper will therefore focus on the position of the V.O.C. in the Dutch Maritime labour market between 1602 and 1622 and how it managed to fulfil their labour

¹ J. Lucassen, 'The international Maritime Labour Market (Sixteenth-Nineteenth Centuries) in: P. C. van Royen, J. R. Bruijn, J. Lucassen, *'Those Emblems of Hell'? European sailors and the maritime labour market, 1570-1870* (Newfoundland 1997) 17.

demand.

Firstly, in order to come to a better understanding of the economic situation in which the V.O.C. had to operate, the exact size of the different branches of maritime labour need to be estimated. Competitors of the V.O.C. when it comes to maritime employment were the merchant marine, sea fisheries, whaling industry and the Navy. This paper will evaluate the size of these five branches in order to examine the position of the V.O.C.. Please note that two other branches, which were also active in the maritime labour market, were the inland fisheries and inland shipping, however, these sectors will not be discussed.

Secondly, we will look at the economic measures taken by the V.O.C. in order fish adequately in this already large pool of maritime labour. How did the wages of the V.O.C. compare to those in the other branches of shipping? Did the V.O.C. create additional financial tools in order to enlarge their market of potential labour?

And lastly the recruitment practices of the five different branches will be described. This will enable us to whether or not the different branches are all using the same recruitment area or that they are all focused on different areas and by doing so spread out the total labour demand.

1. The Dutch Maritime Labour Market.

As mentioned in the introduction, the Dutch Republic the maritime work force was extraordinarily large. This maritime labour market consisted of five large branches of shipping, the Navy, the merchant marine, the whaling industry, sea fisheries and the V.O.C.. In this chapter the size and the workings of these branches will be evaluated. In order to know in what kind of market the different shipping branches were operating, first the workings of the overall labour market of the Netherlands will be described briefly. Secondly we will look at the labour demand per shipping branch. The main goal of this evaluation is to create a clear view on the labour market in which the V.O.C. had to operate. Dutch scholars J.R. Bruijn and J. Lucassen have studied the employment levels in the Dutch maritime sector. In this chapter we will use parts of their research to come to a better understanding of the size of the different branches. However it has to be noted that these estimates will be used when no complementary data is available and the employment level of the V.O.C. will be estimated separately.

Dutch overall labour market.

After 1570 the Dutch labour supply rapidly increased. This development was caused by a strong population growth, an enormous influx of immigrants, a very rapid urbanization (causing an increase in the percentage of the labour force that was working for wages), and a big increase in length of the working year. All these factors caused the Netherlands to be flooded with wage labour, the effective supply of non-farm labour grew by 3% each years during the period 1570 and 1620. ²

This development would have caused a decrease in wages if the demand for labour did not keep up with the increase in labour supply. However, we know that the wages in the

² K. Davids, 'Maritime Labour in the Netherlands 1570-1870' in: P. C. van Royen, J. R. Bruijn, J. Lucassen, '*Those Emblems of Hell*'? *European sailors and the maritime labour market, 1570-1870* (Newfoundland 1997) 54

Republic were continuously rising during the same period meaning that labour demand was able to match and surpass the increase in labour supply. The prices also increased but they did not keep up with the wage increase, causing a decrease of the cost of living.³

However this positive economic situation does not paint the entire picture. A large portion of the labour demand offered casual and temporary employment. In many of the big branches such as the merchant marine, herring fishing, peat digging and the building projects such as polder drainage almost all offered employment on a seasonal basis.⁴ Labourers were often active in different branches of work.⁵ For example, during the first half of the 17th century, boys from Northern Holland worked as sailors during the spring and as polder boys during the summer to go back to the sea again during winter.⁶

Employment levels in the Dutch Maritime Sector.

Maritime labour market

When looking at the numbers of the maritime labour market in de Netherlands, much of the work has been done by J.R. de Bruijn and J. Lucassen. It is because of their work that we now have estimates of the employment levels in the Dutch maritime sector in 1610 and 1630/40 (Table 1.1).

Table 1.1 Employment in the Dutch maritime sector:

	1610	1630/1640	1680
Navy	3,000	8,000	3,500
Merchant Marine	21,500	25,500	22,500
V.O.C.	2,000	4,000	8,000
Whaling	-	1,500	9,000
Sea fisheries	6,500	7,000	6,500
total	33,000	46,000	50,000

Bron J.R. Bruijn, J. Lucassen (eds.) *Op de schepen der Oost-Indische Compagnie, vijf artikelen van J. de Hullu* (Groningen 1980) 14.

³ J.R. Bruijn, J. Lucassen (eds.) *Op de schepen der Oost-Indische Compagnie, vijf artikelen van J. de Hullu* (Groningen 1980) 11.

⁴ Ibidem 55

⁵ J. Lucassen, *Naar de Kusten van de Noordzee, trekarbeid in Europees perspectief, 1600-1900* (Utrecht 1984). 64.

⁶ Ibidem 161.

However, it has to be noted that these estimations relate to periods of normal employment in the history of Dutch shipping where the total level of maritime employment was not influenced by the outbreak of large-scale warfare.⁷ In years of war the number of seafarers rose significantly due to the increase of labour demand in the Navy. During these years of war a lot of non-sailors were working aboard Navy ships.⁸

Merchant Marine

According to the estimations of Bruijn and Lucassen, the Dutch merchant marine was the biggest maritime employer. That the size of the merchant marine must have been more than considerable becomes apparent in some quotes by contemporaries. Already in 1596 the magistrates of Amsterdam proclaimed that the size of the Dutch merchant marine outgrew that of the French and the British with such a margin that no comparison could be made. Three decades later, in 1629, the Dutch stated even more clearly that by thrift and cunningness during the Twelve Years' Truce they were able to outnumber every other nation and serve the entirety of Europe with their ships.⁹

A numerical description of the merchant fleet was given by a foreign contemporary in 1607. According to this source the freight and fishery fleet consisted of 22,370 ships with a total crew of 240,815. The fact that this estimation was used to show the Spanish government how it was possible that the small Dutch republic did not succumb to the war efforts of the Spanish, may have been reason to exaggerate the number of ships and crew.¹⁰

The only somewhat reliable source about the number of ships is a count ordered by the States of Holland in 1636. According to this count the total number of ships in the Dutch

⁷ K. Davids, 'Maritime Labour', 42-43.

⁸ A. de Wit, *Leven, Werken en geloven in zeevarende gemeenschappen, Schiedam, Maassluis en Ter Heijde in de zeventiende eeuw* (Amsterdam 2008) 57.

⁹ P.C. Royen, *Zeevarenden op de koopvaardijvloot omstreeks 1700* (Amsterdam 1987) 13

¹⁰ P.C. Royen, *Zeevarenden*, 13.

merchant marine was 1,750 ships with a total capacity of 155,300 tonnes.¹¹ By combining these number with information found in a resolution of the States of Holland in 1607 enables us to come to an estimate on the total number of employment. With the 1607 resolution, the States of Holland tried to standardize the amount of crewmembers per vessel. The minimum number of crewmembers for the average ship of 90 was set to 12.2. Apparently merchant ships were sailing out with insufficient crewmembers which was all but save. The extent to which this resolution was abided by the merchant sailors is unclear but it is likely that these rules were not taken all too serious. By setting sail with the smallest, most effective amount of crew members the Dutch merchants were able to create a positive position against foreign traders.¹²

Combining this information with the aforementioned number of ships present in 1636 we are able to create an insight in the total crew size of the merchant marine in 1636. The total number of ships was 1,750 with an average capacity of 90 tonnes and ships with this loading capacity had an average of 12.2 crewmembers. This brings us to a possible number of total crew members of 21,500 in 1637.¹³ This number is similar to the estimate of Bruijn and Lucassen of the total employment capacity of the Dutch merchant marine from 1610 until 1770. Their outcome shows a total employment level of 21,500 in 1610. Remarkable about these number is the stability in labour demand in the branch of the merchant marine, between 1610 and 1680 total demand moved between 21,500 and 22,500 employees.¹⁴

Another important aspect in calculating the role of the different branches in the maritime labour market is the level of re-enlistment after return. When re-enlistment rates are high, and thus more crewmembers come back to their former employer, the annual amount of newly recruited employees will be significantly lower than the total labour demand would

¹¹ Bruijn, J.R., 'De vaart in Europa' in: *Maritieme geschiedenis der Nederlanden II* (Bussum 1977) 200

¹² P.C. Royen, *Zeevarenden*, 20.

¹³ P.C. Royen, *Zeevarenden*, 24.

¹⁴ K. Davids, 'Maritime Labour', 42.

suggest.

In the merchant marine the higher ranked personnel often had much higher re-enlistment rates than the lower personnel who were more flexible in their choice of employer and therefore the recruitment area of the latter was also much wider. Despite the lower personnel being less loyal to their employer their re-enlistment rate within the branch of the merchant marine was high, thus intern mobility was high while extern mobility was limited.¹⁵

Sea fisheries

During the 15th century, the branch of the sea fisheries was already an important player in the maritime labour market. In this period the centre of gravity slowly shifted from Flanders and Zeeland to villages near the Meuse and Rotterdam. Around 1600 the sea fisheries employed about 2.5% to 3% of the Republic's total labour force. However, from the start of the 17th century the importance of herring fisheries started to decline, mostly because of the fact that employment in this branch stabilized while the population grew rapidly.¹⁶ Around 1630 there were about 500 herring ships setting sail into the North Sea with average crews of 12 to 14 men. Setting the total number of employees around 6,000 to 7,000 fishermen.¹⁷ These employment levels show that employment in the herring sector stabilized around 7.000 employees per year in the period 1600-1640.¹⁸

Within the branch of sea fisheries the re-enlistment rate was extraordinarily high. This was mostly due to fact that recruitment was done primarily via familial ties because of which loyalty to the employer was high. This will be discussed more thoroughly in chapter 3.

¹⁵ A. de Wit, *Leven, Werken en geloven in zeevarende gemeenschappen, Schiedam, Maassluis en Ter Heijde in de zeventiende eeuw* (Amsterdam 2008) 82.

¹⁶ C. van Bochove, J. L. van Zanden, 'Two Engines of Early Modern Economic Growth? Herring Fisheries and Whaling during the Dutch Golden Age (1600-1800)' in S. Cavaciocchi (ed.) *Ricchezza del Mare secc XIII-XVIII.*(Le Monnier 2006) 562.

¹⁷ J. de Vries, A. van der Woude, *The First Modern Economy*, 249

¹⁸ C. van Bochove, J. L. van Zanden, 'Two Engines of Early Modern Economic, 562.

Whaling

During the beginning of the seventeenth century the maritime labour market saw another large newcomer: the whaling industry. Around 1610 the Dutch started to show interest in the Whaling industry, which led to the establishment of the *Noordsche Comagnie* in 1614. During the first thirty years this company dominated the industry but only slowly expanded their activities. After the dissolution of the monopoly of the Noordsche Company, in 1640, growth started to pick up pace but it would not be for another twenty years for the industry to flourish.¹⁹

At the height of its power in 1740 the whaling industry employed about 2.5% of Holland's total labour force. However between 1614 and 1622 their impact seems to be much smaller with a maximum contribution of around 0.4% in 1620. In 1620 the aforementioned sea fisheries, with approximately 7,000 employees, had a share of around 2.8% in Holland's labour force. These numbers would mean that the whaling industry with 0.4% would have a total number of employees around 1,000 per year.²⁰

Navy

Employment rates in the Dutch Navy are hard to estimate. Employment level fluctuated heavily, depending on whether there was a war raging or not. As table 1.1 shows, labour demand of the Navy in 1610 was around 2,000 people. This number heavily fluctuated over time as is shown in table 1.1. These numbers are calculations in peace time and therefore project a standard employment level, without heavy increases caused by war.²¹ But still, accurate estimates cannot be made, employment levels simply changed too much. For example the number of 2,000 employees in 1610 was most likely exceptionally low because

¹⁹ C. van Bochove, J. L. van Zanden, 'Two Engines of Early Modern Economic, 563.

²⁰ Appendix 1.

²¹ K. Davids, 'Maritime Labour', 42.

of the Twelve Years Truce, which lasted from 1609-1621.²² From 1602 until 1609 and after 1621 it is most likely that the number of personnel serving in the Navy was significantly higher.

V.O.C.

Now that the total number of employees in different branches of shipping are evaluated we need a detailed estimate of the total number of V.O.C. personnel. Unfortunately the muster rolls and wage books of the V.O.C. between 1602 and 1633 are missing and therefore the only information to work with is given in *Dutch Asiatic Shipping* of scholars Bruijn, Gaastra and Schöffner. This work provides us with a detailed overview of the number of ships leaving the Republic and arriving in Asia and vice versa.²³

Firstly, the total amount of employees aboard leaving and returning ships needs to be estimated as precisely as possible. In general, estimates are done by using an average crew size per ship over a certain period. Average crew sizes, however, do not provide us with satisfying numbers because ship sizes fluctuated heavily per year and per type of fleet. Therefore it is vital to calculate the exact number of passengers per individual ship. This has been done by looking at the loading capacity per ship and the average number of employees aboard of ships with the same size, these number are extrapolated from later periods. Crew sizes of outbound ships are relatively well documented and available from 1610 onward. Because of a clear increase in crewmembers in the year 1613, the period 1610-1612 and 1613-1622 have been calculated separately (Table 1.2 and 1.3). These numbers give us a guideline with which we are able to make more accurate estimates about the crew size aboard of each individual ship.

²² M. Prak, *Gouden Eeuw, Het Raadsel van de Republiek* (Amsterdam 2012) 47.

²³ J.R. Bruijn, F.S. Gaastra, I. Schöffner, *Dutch Asiatic Shipping in the 17th and 18th Century, Volume I Introductory volume* (Den Haag 1987).

J.R. Bruijn, F.S. Gaastra, I. Schöffner, *Dutch Asiatic Shipping in the 17th and 18th Century, Volume II Out-Bound Voyages from the Netherlands to Asia and the Cape (1595-1794)* (Den Haag 1979).

J.R. Bruijn, F.S. Gaastra, I. Schöffner, *Dutch Asiatic Shipping in the 17th and 18th Century, Volume III Homeward-bound voyages from Asia and the Cape to the Netherlands (1597-1795)* (Den Haag 1979).

Table 1.2: Average number of crewmembers per ship type on outward voyages (1610-1612)

Tonnage	Avg. crew
60	
80	?
100	
120	
140	90
240	70
250	90
280	80
300	90
340	150
320	110
360	111
400	173
500	200
540	
600	225
700	247
800	252
900	
1000	250

Table 1.3: Average number of crewmembers per ship type on outward voyages (1613-1622)

Tonnage	Avg Crew
60	20
80	22
100	30
120	50
140	60
250	62
300	60
320	70
360	70
400	110
500	126
540	125
600	112
700	137
800	182
900	160

What stands out when looking at these numbers is that there is a clear divide when it comes to the number of passengers between ships with 360 tonnes and those with 400 tonnes of loading capacity. During the period 1610-1613 the difference between these ships is 40 men while for the later 1613-1622 period this difference is 62 men. Most probably this is the difference between the smaller and faster yachts or flutes and the bigger loading ships.

When it comes to homeward bound ships the information on the number of crew members is scarce for this early period. The earliest period in which useful information can be found is 1624-1630.²⁴ Admittedly, the information in this later period also remains scattered but despite this shortcoming only the information from this period is used because after 1630 crew sizes on return vessel increased noticeably.²⁵ The results of the calculation of the tonnage/crew proportion of the homeward journey can be found in table 1.4.

Tabel 1.4 Number of passengers per ship size (1624-1630)

Homeward ship sizes 1624-1630	Avg. crew members
120	25
250	57
350	78
400	75
500	94
550	100
600	102
700	110
900	120

After estimating the average crew size per ship, the next objective is to combine this information with the data on leaving ships per year and with the on board mortality rate. Establishing mortality rates of the outward journey of the V.O.C. also is somewhat of a troublesome task. Various scholars use different rates in different periods. Because most of the data used in this paper comes from *Dutch Asiatic Shipping* the death rate used by Bruijn,

²⁴ J.R. Bruijn, F.S. Gaastra, I. Schöffer, *Dutch Asiatic Shipping in the 17th and 18th Century, Volume I Introductory volume* (Den Haag 1987) 27-32

²⁵ *Ibidem* 34-41.

Gaastra and Schöffner will be also used here.

In estimating the number of employees leaving and arriving back in the republic, the number of crew members found in table 1.2, 1.3 and 1.4 will be combined with a death rate of 9.1% on outward voyages and 15.3% on homeward voyages (a more detailed overview of the number of voyagers per year per ship can be found in Appendix 1 and 2).²⁶²⁷

By calculating this more precise number of employees needed per year an overall view on the V.O.C.'s labour demand becomes clear. Please note that these number represent the entire crew with seafaring personnel, soldiers and other personnel combined.

As is shown in table in table 1.5, the absolute labour demand of the V.O.C. between 1602 and 1622 has been estimated around 30.624. However this number represents the total labour demand per year but does not portrait the exact number of new employees needed per year. In order to achieve a more exact figure of the total labour demand per year the returnees also need the be taken into account. Among the voyagers of the homeward ships was a group who re-enlisted right after arriving back in the Republic. Naturally this had an impact on the total labour demand, self-evidently these recruits did not have to be recruited again and thus are not part of the total number of newly recruited crewmembers. Even though the precise percentage of repatriates is unknown, Bruijn estimates that no less that 50% of the returnees took sail again right after arriving home.²⁸

Thus, by combining the number of outward voyagers with 50% of the homeward arrivals we have a the more precise number of re-enlisting personnel (Table 1.5).

²⁶ J.R. Bruijn, F.S. Gaastra, I. Schöffner, *Dutch Asiatic Shipping in the 17th and 18th Century, Volume I Introductory volume* (Den Haag 1987) 170.

²⁷ Other scholars have found different mortality rates, the possibility that these estimation are correct is nog denied. However for the purpose of this paper the most accurate is believed to be the one used in Dutch Asiatic Shipping. In: Connecting Europe and Asia: J. de Vries, *A Quantitative Analysis of the Cape-Route Trade, 1497-1795* (Berkely) 73. De Vries uses a mortality rate of 9.0% on outward ships and 13.5% on homeward voyages during the period 1602-1699. But because the estimation in *Dutch Asiatic Shipping* cover the period 1602-1620 these estimations give more precise outcomes.

²⁸ J.R. Bruijn, 'De personeelsbehoefte van de V.O.C. overzee en aan boord, gezien in Aziatisch en Nederlands perspectief' in: *BMGN – Historical Review of the Low Countries* vol. 91 – No. 2 (1993) 233.

Table 1.5: Number of outward and homeward arriving ships and personnel and estimated re-enlistment numbers.

Year	Number of ships leaving	Departing employees	Number of ships arriving	Arriving employees	Re-enlistment
1602	15	1500	0	0	0
1603	12	1180	0	0	0
1604	1	62	11	748	374
1605	12	1448	4	278	139
1606	10	1250	8	653	327
1607	14	1860	2	188	94
1608	2	88	7	563	281
1609	1	50	5	544	272
1610	11	914	5	427	214
1611	13	1079	6	541	271
1612	5	708	2	195	97
1613	12	2160	4	369	184
1614	15	2209	2	180	90
1615	7	853	3	212	106
1616	8	1609	4	301	150
1617	12	1557	5	416	208
1618	12	2381	7	544	272
1619	17	3433	6	422	211
1620	23	3003	6	478	239
1621	18	3025	5	386	193
1622	3	387	10	777	389
Total	223	30624	102	8222	4111

Crew proportions in the V.O.C.

Over the entire period of its existence the crew proportions are believed to be 60% seafarers, 30% soldiers and 10% other personnel.²⁹ However due to some clear policy changes it is highly doubtful that this was also the case during the entire 1602-1622 period. In order to come to a more detailed estimation of the crew proportions the V.O.C.'s military situation will be evaluated.

Due to the different nature of the V.O.C. compared to the *voorcompagniën* the composition of the crew changed over time. Before the establishment of the V.O.C., actions in Asia were purely aimed at achieving the highest profits. Military force was purposely kept to a minimum and a standard merchant ship was armed with only the necessary equipment to

²⁹ J.R. Bruijn, F.S. Gaastra, I. Schöffer, *Dutch Asiatic Shipping in the 17th and 18th Century, Volume I Introductory volume* (Den Haag 1987) 146.

repulse attacks of hijackers and pirates.³⁰

This trade-first attitude changed when the V.O.C. was established in 1602. From the moment the charter was formed the V.O.C. was forced by the State General to build fortresses and keep military troops in Asia. Despite these intentions, aboard of the ships of the first V.O.C. fleet there were no soldiers present, only some constables, *bosschieters* and trumpeters were on board.³¹ The second fleet, under Cornelis Matelief (1605-07), had much more of a military character with around two hundred soldiers spread over eleven ships. So the number of soldiers of the fleet of Matelief was 200, while the total number of voyagers was 1,386.³² This shows that the percentage of soldiers on this fleet was 14.4% while seafarers constituted 75.6%. The percentage of other personnel is hard to establish due to a lack of solid information, therefore we use the estimate of 10% as used in Dutch Asiatic Shipping.³³

Just like the fleet of Matelief, the third fleet, led by Paulus van Caerde, also had more of a military character, compared to the first fleet. Until right before the fleet set sail, no information is to be found about trade before war priorities or the other way around. However shortly before leaving, van Caerde received an extra message in which he was ordered to use his ships in battle against English and Portuguese ships.³⁴ Unfortunately there is no information on the composition of van Caerde's crew. However because this fleet left under similar circumstances as Matelief we will use the same percentage of soldiers of 14.4%, 75.6% seafarers and 10% other personnel.

Eventually, in August 1606, the Gentlemen XVII decided to regulate the composition of the crew. As of that moment big ships were to have fifty soldiers while the smaller yachts were manned with ten men of arms. Subsequently, the fleet under command of admiral

³⁰ D. de Iongh, *Het Krijgswezen Onder de V.O.C.* (Den Haag 1950) 31.

³¹ Ibidem.

³² Ibidem 32.

³³ J.R. Bruijn, F.S. Gaastra, I. Schöffer, *Dutch Asiatic Shipping in the 17th and 18th Century, Volume I Introductory volume* (Den Haag 1987) 146.

³⁴ A. de Booy, *De Derde Reis van de V.O.C. naar Oost-Indië onder het beleid van Admiraal Paulus van Caerden, uitgezeld in 1606* Deel 1 (Den Haag 1968) 11.

Verhoef in 1607 set sail with a total number of 400 soldiers. Verhoef's fleet had a total number of around 1,760 passengers and crewmembers, among which were 400 soldiers.³⁵ Here we see a clear rise in the percentage of soldiers, the 1607 fleet had a crew of which 22.7% were soldiers. It seems that the decision of the Gentlemen XVII was followed up reasonably well. Presuming the tonnage noted in *Dutch Asiatic Shipping* is correct it would mean that the fleet contained 9 large ships and 7 smaller vessels which should have manned 490 soldiers according the new rules of the Gentlemen XVII.³⁶

After returning, Matelief urged the Gentlemen XVII to establish a central hub in Asia under the authority of one commander.³⁷ This step was necessary due to an unavoidable mounting of political tensions caused by the trading efforts. In September 1609 the Gentlemen XVII decided to take Matelief's advice to heart and installed a Governor-General in Asia. The Governor-General would become the chairman of a Counsel of the Indies and remained in this position for four to five years.³⁸ At this point there was a total number of 600 soldiers and 500 seafarers present in the East.³⁹

When Pieter Both was appointed as the new first Governor General the assignment was clear. Both had to assemble a counsel in every office and establishment outside of Bantam until a central hub was created. The consequence of this assignment was clear, land had to be occupied and a land and sea force had to be established. Here we see a transition point of trade oriented action towards more military actions.⁴⁰

Real changes started to take shape with Jan Pietersz. Coen. Coen had troubles accepting the way in which military engagement was handled by his predecessors.

Throughout the years Coen had complained several times about the lack of soldier. On

³⁵ D. de Jongh, *Het Krijgswezen*, 33

³⁶ See Table 3.1.

³⁷ L. Akveld, *Machtsstrijd om Malakka: De reis van VOC-admiraal Cornelis Cornelisz. Matelief naar Oost-Azië, 1605-1608* (Zutphen 2013) 11.

³⁸ D. de Jongh, *Het Krijgswezen*, 33.

³⁹ A.TH. van Deursen, *Resolutiën der Staten Generaal Nieuwe Reeks 1610-1670, Eerste Deel 1610-1612* (Den Haag 1971) 254.

⁴⁰ D. de Jongh, *Het Krijgswezen*, 33-34.

December 27th 1614 Coen sent out a letter to the Gentlemen XVII of the V.O.C., making clear that trade in the Indies had to be supported by use of military force and vice versa, military force had to be supported by the incomes from trade.⁴¹ One year later on October 22nd 1615 Coen sent another letter stating that the people from Pangeran and Bantam were not impressed by the military power of the V.O.C.: ‘ships cannot follow us into the mountains’.⁴² With this letter he expressed clear wishes for installing a land force.

Evidence that his wishes were not completely granted by the Gentlemen XVII is the fact that Coen, in 1618, still complains about the trading mind-set of the V.O.C.. According to Coen he did not receive the military force he needed. Coen is almost begging for more men, more ships and more money.⁴³ The true cause of the complaints of Coen is hard to identify. Possibly Coen was indeed in dire need of more men and money and his complaints were justified. But at the same time it is possible that Coen was not easily satisfied with whatever recourses the Gentlemen XVII provided him with. As Governor General Coen’s thought could have been: the more manpower and money the better. Lastly, a third possible reason for the almost constant stream of complaints is that Coen was chasing bigger goals than the Gentlemen XVII and thus needing more recourses.

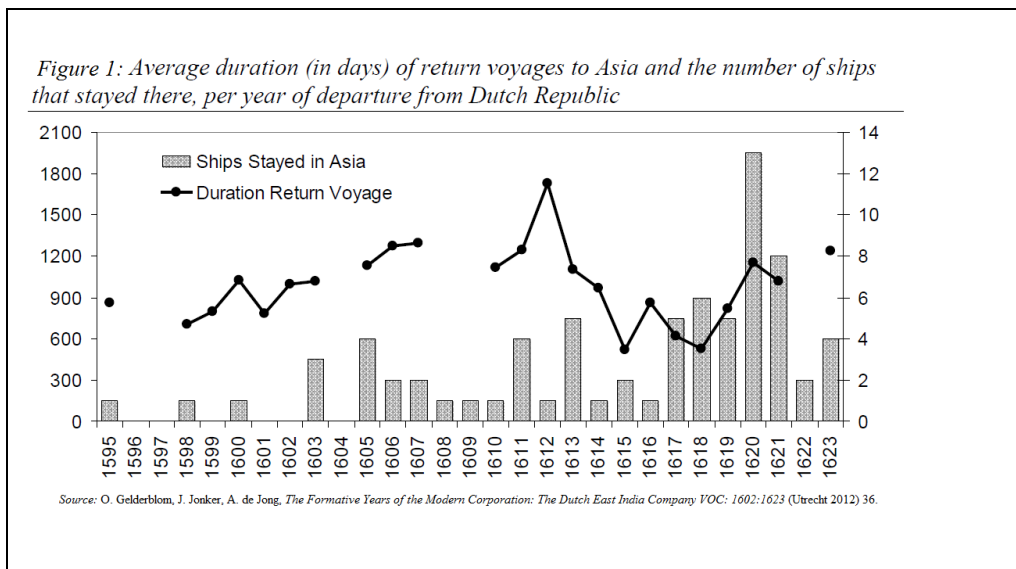
Due to the uncertainty surrounding the nature of Coen’s complaints it is difficult to reconstruct the crew proportions of the fleets after 1609. Most likely the number of soldiers rose significantly after 1609, but the total amount of voyagers also quickly increased (see table 1.5). Adding to this is the fact that more and more ships were staying in the Indies, meaning that apart from extra soldiers, extra seafarers were needed to man these ships and more civilian personnel to handle the administration (Figure 1). Therefore the question is whether the V.O.C. sent out a higher percentage of soldiers, or increased the total number of passengers and crewmembers with the same proportions? The increase in ships staying in the

⁴¹ D. de Jongh, *Het Krijgswezen*, 38.

⁴² H.T. Colenbrander, *Coen, bescheiden omtrent zijn bedrijf in Indië* (Den Haag 1919) 119.

⁴³ D. de Jongh, *Het Krijgswezen*, 38.

indies seems to indicate the latter and therefore in the percentages of 67.3% seafarers, 22.7% soldiers and 10% other personnel will be maintained in the period: 1609-1622. Thus the absolute number of soldiers increased significantly during these years but relatively the proportions stayed the same.



Now that we have established the layout of the outward ships we also need to calculate the proportions of the returning ships to determine an estimated number of re-enlistments of the three different groups of employees.

The percentages used by most scholars for the return journey are the same as for the outward journeys (60% seafarers, 30% soldiers, 10% others).⁴⁴ However, to come to a more precise estimate, these figures also need a more detailed calculation to establish the impact of re-enlisting personnel.

Where the information on the crew proportion on the outward vessels was scarce, information on the proportion of the returning vessels is almost non-existent for this period.. We know that soldiers took service for three years and soldiers for five years. Despite the fact that employees may have been able to renew their contracts in the Indies, we use the standard lengths of the contracts because information on renewed contracts is lacking.

⁴⁴ J.R. Bruijn, F.S. Gaastra, I. Schöffer, *Dutch Asiatic Shipping in the 17th and 18th Century, Volume I Introductory volume* (Den Haag 1987) 147.

Then, by looking at the total amount of seafarers and other personnel that set sail in the period 1602-1619 and soldiers during the period 1602-1617 we have a rough estimate of the personnel that should have served their time in the V.O.C. For seafarers that would mean that 17,225 employees had served their time, 3,358 soldiers and 2,356 for other personnel. So the total amount of employees who reached the end of their contract between 1602 and 1619 was 22,943. With a total amount of 9,955 people leaving Asia it means that 43.4% of the arrivals left at the time their contract expired, meaning that 56.6% either died or stayed in the indies. That means that 7,475 seafarers, 1,457 soldiers and 1,022 other personnel left on the homeward voyages. Thus aboard of the homeward ships, 75% was seafaring personnel, 14.5% soldiers and 10.5% other personnel (Table 5.1). However, until 1609 no soldiers returned to the republic, and therefore the percentages aboard of homeward ships between 1602 and 1609 are 89% seafarers and 11% other personnel (same calculation).

Table 1.6: Crew composition on outward and homeward journeys (1602-1622)

Year	Total employees outwards	Seafarers	Soldiers	Other	Total employees homewards arriving	Seafarers	Soldiers	Other
1602	1500	1350	0	150	0	0	0	0
1603	1180	1062	0	118	0	0	0	0
1604	62	56	0	6	748	666	0	82
1605	1448	1095	208	145	278	247	0	31
1606	1250	945	180	125	653	581	0	72
1607	1860	1252	422	186	188	167	0	21
1608	88	59	20	9	563	501	0	62
1609	50	33	11	6	544	484	0	60
1610	914	615	207	92	427	320	62	45
1611	1079	726	245	108	541	406	78	57
1612	708	477	160	71	195	146	28	20
1613	2160	1453	491	216	369	277	54	39
1614	2209	1487	501	221	180	135	26	19
1615	853	574	194	85	212	159	31	22
1616	1609	1083	365	161	301	226	44	32
1617	1557	1048	354	155	416	312	60	44
1618	2381	1603	540	238	544	408	79	57
1619	3433	2311	779	343	422	317	61	44
1620	3003	2021	682	300	478	359	69	50
1621	3025	2036	686	302	386	290	56	41
1622	387	260	89	38	777	583	113	82
Total	30706	21546	6135	3075	8222	6583	761	878

Now we know how many employees set sail per year, how many came back, how many re-enlisted and finally, the proportions of the outward and homeward ships. If we combine this information, a more precise estimate of the labour demand of the V.O.C. can be made (Table 1.7). This table combines all the data collected and shows the total amount of employees needed per year, per type of work.

Table 1.7: Total labour demand V.O.C. (1602-1622).

Please note that the numbers in brackets is the total number of re-enlistments exceeding that years labour demand. These employees are deducted from next years' labour demand as we presume they re-enlist the next year.

Year	Total outwards	Total re-enlistment	Seafarers needed	Soldiers needed	Other needed	New recruits needed	% of new recruits of the total labour demand.
1602	1500	0	1350	0	150	1500	100%
1603	1180	0	1062	0	118	1180	100%
1604	62	347	0 (277)	0	0 (35)	0 (312)	0%
1605	1448	139	695	208	95	998	69%
1606	1250	326	655	180	89	924	80%
1607	1860	94	1169	422	176	1766	95%
1608	88	281	0 (192)	20	0 (22)	0 (194)	0%
1609	50	272	0 (401)	11	0 (46)	0 (436)	0%
1610	914	213	55	176	24	454	50%
1611	1079	270	523	206	80	809	75%
1612	708	97	404	146	61	611	86%
1613	2160	184	1315	464	197	1975	91%
1614	2209	90	1420	488	212	2119	96%
1615	853	106	495	179	74	747	88%
1616	1609	150	970	343	145	1458	91%
1617	1557	208	892	324	133	1349	87%
1618	2381	272	1399	501	210	2109	89%
1619	3433	211	2153	749	321	3222	94%
1620	3003	239	1842	648	275	2764	92%
1621	3025	193	1891	658	282	2831	94%
1622	387	388	0 (32)	33	0 (2)	0 (1)	0%
Total	30756	4111	18286	5754	2639	26678	87%

What table 1.7 seems to suggest is that the V.O.C. during its first 8 years of its existence was only periodically in need of substantial numbers of employees. It is during this period that the V.O.C. was a relatively small player in the maritime labour market,

employment levels in the branches of sea fisheries and merchant marine were substantially higher. This strong fluctuation during the first 8 years is most likely due to financial problems of the V.O.C.. During the initial years of the company the costs constantly exceeded revenues, causing financial problems for the starting company. It is after 1610 that employment levels started to rise systematically and the V.O.C. started to become a growingly important employer. The role of the V.O.C. must have been even bigger because as we have seen, the other maritime branches were active in seasonal labour with high re-enlistment rates while the re-enlistment rate of V.O.C. personnel in the period 1602-1622 was only 13%. Thus every year the portion of new recruits was much higher in the V.O.C. than elsewhere. Between 1602 and 1622, 87% of the employees had to be newly recruited. The fact that the re-enlistment rates of the V.O.C. was substantially lower than in the other branches forced the V.O.C. to become much more active in recruiting new personnel.

The labour demand of the merchant marine and sea fisheries was relatively stable in the period 1602-1622 at 21,500 and 7,000 employees. However, with the labour demand of the V.O.C. growing substantially after 1610 and the emergence of the whaling industry in 1614, the maritime labour market experienced a growth in the first two decades of the 17th century. However the share of the maritime labour market in the overall labour market most likely did not grow to the same extent. Population levels of Holland also rose quickly, from 500,000 in 1600 to 750,000 in 1640 and thus the growth of the maritime industry was probably matched by a growth of the overall labour market.⁴⁵ In 1600 the labour market of Holland had a labour force of around 200,000 employees while in 1620 it grew to a size of 250,000 and thus leaving space for the growth of the maritime labour market.⁴⁶

⁴⁵ C. van Bochove, J. L. van Zanden, 'Two Engines of Early Modern Economic, 562.

⁴⁶ *Ibidem*, 564.

2. Wage policy and financial tools of the Dutch East India Company.

The establishment of a European trade empire in the Indies by the V.O.C. brought along far reaching organisational innovations. With the headquarter in Europe, thousands of employees spread around half the globe and forts located on the eastern and western coasts Africa and the South-East Asian Archipelago. The success of the trade operation was in part dependent on the management of trade and personnel and as we have seen total labour demand was on the rise in the maritime labour market. But the V.O.C. had one important aspect which their competitors for employment lacked: the V.O.C. was a large company with a strong administrative apparatus. Where the branch of merchant shipping and the whaling industry consisted of small companies with one or maybe a couple of ships, the V.O.C. had a large organisation with a high administrative capacity. This enabled the V.O.C. to create various financial tools to attract employees.

Wages.

Estimating average wages for the period 1602-1622 has proven to be a hard task. Again, the lack of exact information is the main cause for this. Yet there is an almost overall accepted view that wages paid by the V.O.C. remained steady during the seventeenth and eighteenth century. However this is highly doubtful when looking at the early period of Asiatic shipping. The wages paid by the *voorcompagniën* and the early V.O.C. differed per fleet. When comparing the wages of the *voorcompagniën* with those of the V.O.C. in 1630 a number of developments catch the eye. Firstly, wage development of wages paid to different kinds of employees is showing different courses. Secondly a move towards standardisation of salaries can be noted.⁴⁷

This move from fluctuating wages towards standardization most probably took place over time and was not decided on at the very start of the V.O.C. There seems to be a trend of

⁴⁷ H. Ketting, *Leven, Werk en Rebelle aan boord van Oost-Indië vaarders* (Amsterdam 2005) 56.

wage deduction over time, especially in the higher ranks of the company. Where most of the captains earned between 80 and 100 guilders in 1600, their pay was reduced to 66 guilders in 1630.⁴⁸ This lowering the higher personnel's wages probably happened soon after the establishment of the V.O.C. Also, these wages were not as solid as previously thought because already in 1619 the chamber of Zeeland decided to raise the wages of the captains from 55 to 70 guilders because they were having trouble recruiting experienced higher personnel.⁴⁹ This same development was the case for the wages of the lower officers, although less severely. A high boatman went from 27 guilders in 1600 to 24 guilders in 1630. After 1630 it seems that wages in the V.O.C. changed little to nothing.⁵⁰

When looking at the spread of the wages among the different kind of employees it can be cautiously inferred that the first and second mates earned around 3 to 5 times the wage of an able seaman. Within the other branches of shipping this different was around 3 times the wage. Also wages in the merchant marine and sea fisheries in the lower ranks, and thus the bulk of the crew, were significantly higher than those paid by the Navy and the V.O.C. (Table 2.1). Therefore the rule stands: the further the distance, the more dangerous the voyage and the lower the salary. However salary was only one part of the total earnings of the employees of the V.O.C.

Table 2.1: Wages development of able seamen in the Navy, merchant marine and V.O.C. paid in guilders per month.

Branch	1621	1650	1700-1725
Navy	8	10-11	11
Merchant marine	-	10-15	14.5
V.O.C.	-	11-12	11-12

⁴⁸ H. Ketting, *Leven, Werk en Rebelle* 57.

⁴⁹ R. van Gelder, *Duitsers in Dienst van de V.O.C. (1600-1800)* (Nijmegen 1997) .

⁵⁰ H. Ketting, *Leven, Werk en Rebelle* 57

Apart from their normal salary V.O.C. personnel had the advantage that housing and food and drinks were included in their pay and there were possibilities to increase their income. For example, all employees had the right of ‘*voering*’, which meant that they could use a part of the loading space for private business. This was a payment arrangement already instituted in the thirteenth century in the common law of the Atlantic shores called Roles d’Oléron. According to the article letter of 1619, V.O.C.-employees were allowed to take two months’ worth of private business wares. One condition of this right was that the seafarers had to fit their wares in crates with specific measurements. Despite this condition many voyagers took more goods with them. When the limits of the crates were exceeded they spoke of private trade. Despite the fact that this trade was illegal, the controlling of the compliance of this rule does not seem to be all too tight.⁵¹

The employees also had the right to receive a portion of profits earned when an enemy ship was hijacked. This, however, was highly incidental. When an enemy ship was taken large parts of the loot went to the Republic, the V.O.C., and later the prince. Of the entire loot only one sixteenth was left for the crew.⁵²

These secondary conditions adding to the salary of the employees must have enabled the V.O.C. to compete with the other branches. The fact that salaries in the other branches were raised while the salary in the V.O.C. was stable over a long period of time means that the V.O.C. was able to recruit personnel effectively, despite the growing labour demand. It is also because of these secondary conditions that the idea of the low wages of the V.O.C. compared to those paid in other branches seems to be false.

⁵¹ H. Ketting, *Leven, Werk en Rebellie* 58

⁵² P. van Dam, *Beschryvinge van de Oostindische Compagnie Eerste boek, Deel 1* (Den Haag 1927) 471-493

Financial tools

Enlisting to become a V.O.C. servant came with some severe downsides. The risks were high because of the high mortality rates and married men had to leave their family for a long period of. These obstacles were obstacles the V.O.C. had to overcome in order to satisfy their need for personnel. To lower the hurdle for potential employees the V.O.C. made use of several financial tools which will now be discussed shortly.

Before leaving, the recruited sailors could receive two months' worth of pay in advance (*handgeld*). The rest of their salary got written down in the 'soldijboeken' and was to be collected after return. Employees were also able appoint someone else to receive parts of their pay while they were abroad, these recipients could be family members or debtors. Firstly they could transfer three months' worth of pay to their family via a so-called *Maandbrief*. Secondly, there was the possibility to transfer money to debtors by writing a *Transportbrief* by which the owed amount got paid in yearly terms to the debtor. And lastly their sailors had the possibility to go the a notary to put together a notarial act for the person to whom they wanted to transfer money.⁵³

Handgeld.

Providing an advanced payment of two months' worth of salary before the employee started his work was in ingenious method to give the opportunity to work for the V.O.C. even when the employee did not have a single *stuyver* in his pocket. The long journey to the Indies required some necessary gear which was not provided by the company. During the sixteenth century this was business as usual, seafarers in the other braches also had to arrange their own gear. However by the construction of *handgeld* everyone was supposed to be able to buy their gear before taking service. This way the V.O.C. lowered one of the hurdles preventing poor

⁵³ C. van Bochove, T. van Velzen, *Loans to salaried employees: the case of the Dutch East India Company, 1602-1794* (Oxford, 2013) 21.

people to enlist and thereby enlarging their potential recruitment pool.⁵⁴ However, the V.O.C. was not the only company making use of this construction. Sea fisheries already made use of *handgeld* in 1575 and it is known that the Navy also gave out cash advances.⁵⁵ Therefore the V.O.C. simply made use of a payment arrangement that was common in its time.

Transport-letter.

When the advance of two months' worth of salary did not suffice another financial tool was available, called a *transportbrief*, or transport-letter. The bearer of a transport-letter was allowed to collect a specific amount from the salary account of the V.O.C employee who signed transport-letter. The amount was determined beforehand and could be up to 15-17 months' of salary.⁵⁶ The recipient a transport-letter could use it to collect salary from the account of the employee who gave the letter or sell it. When an employee decided to do the latter interest was deducted so that the actual amount paid was lower than the amount on the transport-letter.

Literature on this particular payment method mainly focusses on foreign V.O.C. personnel. Immigrants mostly arrived in the republic empty-handed and lacked a network of friends or family and had no collateral to raise money for their daily needs. To overcome this problem, innkeepers, often called *zielverkopers* (soul sellers), would offer them board, lodging and travel equipment if the immigrant agreed to take service in the V.O.C. and give them their transport-letter. By telling stories of unimaginable riches that awaited V.O.C. employees in the Indies they tried to persuade them in agreeing.⁵⁷ The innkeepers on their turn often sold the transport-letter to intermediaries in order to generate fast revenue.⁵⁸ Of course it was in the interest of these innkeepers to keep expenses as low as possible and

⁵⁴ H. Ketting, *Leven, Werk en Rebelle*, 54.

⁵⁵ A.P. van Vliet, *Vissers en Kapers, de Zeevisserij vanuit het Maasmondgebied en de duinkerker kapers (ca. 1580-1648)* (Den Haag 1994) 39.

⁵⁶ C. van Bochove, T. van Velzen, *Loans to salaried employees* 21.

⁵⁷ M.P.A. Ketelaars, *Compagniedochters: vrouwen en de V.O.C. (1602-1795)* (Amsterdam 2014) 51.

⁵⁸ C. van Bochove, T. van Velzen, *Loans to salaried employees* 22.

therefore there are strong allegations that they put their 'guests' under house-arrest and provided them only basic needs.

Despite these questionable actions of the innkeepers, the construction of the transport-letters seems to be an efficient method to overcome difficulties that might restrain poor immigrants from taking service in the V.O.C.. The exact number of employees of the V.O.C. making use of this arrangement is unknown for the period 1602-1622. However we do see that in 1635 around 40% of the foreign employees made use of a transport-letter and around 20% of the local employees.⁵⁹ However, more exact reasons to explain the use of transport-letter by local employees remains hard to find in current literature. However the key to this question might lie in the number of married personnel. Recent developments in household-economy-literature has pointed out that the number of married men setting sail on company ships might have been larger than previously thought.⁶⁰

Employment in the V.O.C. meant that contracts were signed for three to five years. This, along with the above mentioned high mortality rate would have heavily disrupted household income levels. The use of transport-letters must have been used to alleviate some of the problems caused by the long stay abroad of the husband.⁶¹ Unfortunately for these households this source of income was not without risks. The payments of the transport-letters were cancelled when the employee died or deserted. Payment also stopped when a ship sank or got hijacked by the crew or pirates.⁶² When an employee died during the journey the inheritor would receive the salary earned until the time of death minus two months. The problems were even bigger was a ship was lost during the journey. The V.O.C. had the ship and its cargo as collateral for the wages.

One popular way of avoiding the risk of losing the payments of the transport-letter was

⁵⁹ Ibidem 28.

⁶⁰ C. van Bochove, T. van Velzen, *Loans to salaried employees* 5.

⁶¹ Ibidem

⁶² Ibidem 8.

to sell them. Selling transport-letters insured the bearing of the letter against the high mortality rate. When this insurance measure was not taken the inheritor would receive the salary of the late employee minus the two-months *handgeld* and four guilders for the personal chest which the V.O.C. provided. By selling the *transport-letter* early-on for eight months' worth of pay would secure 2.5 more months of salary for the former bearer of the *transport-letter*.⁶³

However it remains uncertain whether the V.O.C. already made use of *transportletters* during the first twenty years of its existence. Before 1630 there are no *transportletters* preserved and therefore it is uncertain whether they were in use during the first 30 years or not.⁶⁴ Another uncertainty surrounding the *transportletters* is whether this construction was unique for its time or that its use was more widespread. However due to the seasonal nature of the work in the other branches it seems likely that the V.O.C. was the only company using this construction. For sailors who left home for just a couple of months before returning the use of a *transportbrief* seems unnecessary.

Maandbrief.

The third financial tool designed by the V.O.C. was mainly focussed on motivating married man to take a job in the company. Because of the aforementioned long time away from home, the dangers were that the income stream of the family left behind would run dry when the husband, as the main source of income, was abroad for a couple of years. To compensate this loss of direct income, employees had the possibility of signing a so-called *maandbrief*. By doing so a close relative of the crewmember was able to collect an annual amount of three-months' worth of salary from the salary account. This way, the families left in the Republic could keep a certain level of income and thus making employment with the V.O.C. possible

⁶³ C. van Bochove, T. van Velzen, *Loans to salaried employees* 8.

⁶⁴ *Ibidem* 22.

for the husband.⁶⁵

When it comes to using these different methods of payment, the payment of the *maandbrief* to family member always had priority.⁶⁶ This, however, depended on whether the money was present on the account of the employee. The seafarer could collect a maximum of 6 months' pay during the voyage, debts to the company could have to be paid or the seafarer could have gotten fines which also had to be paid from his account.⁶⁷

3. Recruitment policy in different branches of shipping.

Within the academic world a consensus has been reached on the idea that the Dutch maritime labour market consisted of two elements, an internal and external segment. Dutch scholar Karel Davids defines these segments as follows: workers within the internal segment had regular ties with their employer and repatriation rate among employees was high. This was mostly due to the seasonal nature of the particular trades, every season these sailors returned to work for their old employer. This internal segment consisted for a large part of the merchant marine, whaling industry, sea fisheries and the higher ranks in the Navy and V.O.C.. The external segment consisted of a flexible mass of casual and migrant workers mostly active in the Navy and V.O.C..⁶⁸

Despite the overall acceptance of this concept of two separate segments of the labour market, Ketting has strong doubts on whether this segmentation really was this clear. Especially about the early seventeenth century he is sceptic.⁶⁹ The importance of answering the question whether the maritime labour market was segmented is important because the outcome has implication for the recruitment area used in the different branches. By looking at the differences and similarities of the recruitment policy of the various branches of shipping the existence of these two different segments will be examined.

⁶⁵ P. van Dam, *Beschryvinge* 620.

⁶⁶ P. van Dam, *Beschryvinge* 622.

⁶⁷ H. Ketting, *Leven, Werk en Rebelle*, 55.

⁶⁸ K. Davids, *Maritime Labour in the Netherlands* 62.

⁶⁹ H. Ketting, *Leven, Werk en Rebelle*, 307.

Sea Fisheries

At the end of the sixteenth century, the captain of the fishing ships was often also the ship-owner and manning the ship was done by himself. This changed a little with the emergence of the bookkeepers. As of then the bookkeeper hired a coxswain, who in his turn was responsible for hiring the crew. In this situation the captain was now acting as some sort of intermediary, at the same time he was an employee of the shipping-company and employer of the seafaring personnel.⁷⁰

The process of hiring the crew mostly took place in the coxswain's home or in a nearby inn. Seafarers often came to offer their services to the coxswain's after meetings of the fisher assembly. Initiative for hiring higher placed crew members often came from the side of the coxswain himself.

Re-enlistment rates of the personnel were high, journals show that year after year ships sailed out with the same crew. This high level of loyalty towards the former employer can be explained by the existence of close family ties between crew and captain. Crew members were mostly recruited via family ties or close relations⁷¹

When the familial source of higher employee was depleted the coxswain mostly hired people from the local community area. When he was experience he often looked for crewmembers he had worked with in the past. Another condition on which crewmembers got selected was religion, Most of the time the crew was recruited from the same village and with the same religious believes.⁷²

The lower crew members were often recruited from the local orphanage.⁷³ These orphans could be offered to live in a foster home with the promise they would work in the fishery or they were hired for single voyages.

⁷⁰ A. de Wit, *Leven, Werken en geloven in zeevarende gemeenschappen, Schiedam, Maassluis en Ter Heijde in de zeventiende eeuw* (Amsterdam 2008) 82.

⁷¹ A. de Wit, *Leven, Werken en geloven* 83.

⁷² *Ibidem*.

⁷³ *Ibidem* 85

Merchant marine.

The recruitment practices of the merchant marine shared many characteristics with the sea fisheries. As with the fishing ships, a bookkeeper or ship-owner hired a coxswain who in his turn hired the crew. The big difference with the sea fisheries was that the time it took to recruit the employees was considerably longer in the merchant marine. Coxswains not only had to deal with the ship-owners but had to negotiate with loading personnel. The coxswain had to negotiate with the loader in order to set up contracts in which the type of goods and travel destination got determined. When the coxswain received a go by both the loaders and the ship-owner he could set out to recruit his crew. The recruitment practices of hiring lower personnel were the same as in the branch of sea fisheries and went via personal ties.⁷⁴

Navy.

Just like the recruitment methods in the aforementioned branches higher ranks in the Navy were also filled via personal ties. As soon as a captain was appointed to man a ship he started recruiting the crewmembers. The admiralty provided lists with possible officers, who often offered their services themselves. Most of the time they already knew the captain or were part of the same social class. When the higher staff was hired they all helped in manning the rest of the ship.⁷⁵

Contrary to the English marine, the Dutch navy did not work with pressgangs. But instead, sailors in the various harbours were notified that the Navy was hiring. It was not the case that only professional soldiers were hired, also normal seafaring personnel and civilian personnel were needed in the Navy. Most of the naval sailors who took service as a soldier were fishermen or merchant sailors and aimed on returning to their old profession after they served their time and thus re-enlistment rates were low. Where the use of orphans in the merchant marine was widespread, the Navy recruited noticeably less orphans. Regents of the

⁷⁴ A. de Wit, *Leven, Werken en geloven* 86.

⁷⁵ A. de Wit, *Leven, Werken en geloven* 89.

orphanages often were reluctant to give permission for the Navy to use orphan boys due to the high risks involved in the Navy.⁷⁶

V.O.C.

Similar to the other branches, in the early years of the company the coxswains was appointed by the *bewindhebber* (in other branches the bookkeeper or the ship-owner). Every *bewindhebber* could suggest a possible admiral who then had to be accepted by the entire counsel.⁷⁷ Thereafter, the hiring of the lower personnel was done by the coxswains of the ships. Because of this structure, large parts of the crew came from the same place of residency as the coxwain. When they were hired they received 6 stuyvers in cash, this rule got abandoned in 1606 but probably these 6 stuyvers in cash got replaced by the 2 months advance in salary in the form of *handgeld*. However this remains a presupposition.⁷⁸

Thus, this way the recruitment of the V.O.C. was comparable to the recruitment policy of the other branches. According to Ketting and de Wit this way of recruiting personnel slowly changed during the course of the first quarter of the seventeenth century. Less and less personnel was hired via personal ties. This change in recruitment practice was most probably caused by the rapid increase in labour demand after 1610 as described in chapter 1. The labour source via personnel ties simply could not provide sufficient numbers of personnel. Especially considering that 87% of the annual recruits had to be newly hired.

After a while, potential employees had to come to the recruitment offices in one of the V.O.C. Chamber cities. Here their qualities as a sailor were tested, but this was probably not that intensive.⁷⁹ As a consequence of these changes it is also likely that at this point the aforementioned *zielverkopers* came to the fore, to attract foreign labourers.

When it comes to the quality of the personnel, a lot of complaints were made by the

⁷⁶A. de Wit, *Leven, Werken en geloven*, 90.

⁷⁷H. Ketting, *Leven, Werk en Rebelle*, 62

⁷⁸P. van Dam, *Beschryvinge*, 555.

⁷⁹A. de Wit, *Leven, Werken en geloven*, 91

coxwains and Governor-Generals during the eighteenth century about the abominable shape of the personnel. However already in 1614 these same complains were expressed by Pieter Both. According the Both there were only crooks and vagabonds aboard of his ships.⁸⁰ This shows that as soon as in 1614 the V.O.C. was already having troubles attracting able personnel.

Geographic origins.

In order to have a complete idea about the workings of the Dutch maritime sector and the role of the V.O.C. within this sector it is of vital importance to look at the geographical origins of the sailors within the different branches.

Starting with the merchant marine, unfortunately information about origin is scarce. The only information left behind about these sailors are the ones who either positively or negatively left a trace in history. Research has been done on this subject by a few scholars who all used the shipping journal of *Hindeloopen*. This journal contains 68 muster rolls of 47 individual skippers employing a total of 911 seamen. Of these 911 seamen, 91, 55% came from Hindeloopen itself, 21% originated from the rest of Friesland, 3% came from the Wadden Islands, 5% from Holland above the Y, 4% from the rest of the Republic and 11% from outside the republic.⁸¹ However, despite the fact that the numbers derived from this journal are precise it remains an uncertainty to what extend they are representative for the entire branch.

Secondly, the geographic origin of the employees in the branch of sea fisheries also remains unclear. Estimation are that before 1750, the herring fisheries recruited their personnel almost exclusively locally.⁸² Unfortunately this is the only information available.

⁸⁰ P.J.A.N. Rietbergen, *De eerste landvoogd Pieter Both (1568-1615) : gouverneur-generaal van Nederlands Indië Deel II (1609-1614)* (Zutphen 1987) 310.

⁸¹ P.C. Royen, *Zeevarenden* 26-28

⁸² J.R. Bruijn, J. Lucassen (eds.) *Op de schepen der Oost-Indische Compagnie* 20

Thirdly, the origin of the whaling personnel is better documented and therefore a better view on the origins of its crew can be put out. During the beginning of the Dutch whaling industry in 1610, the whaling ships saw a high percentage of foreign crewmembers. Between 1612 and 1639 69.7% was Dutch whereas 30.3% was foreign. Of all sailors, 42.9% came from Holland North of the Y, 10% from South Holland and 26.9% from the French Basque region. This high percentage of Basque immigrants was due to the fact that the Basques had already established a sizeable whaling industry in the 1540's. Foreign countries, among which the Republic, were eager to make use of their expertise in this newly emerging trade.⁸³ These figures show that the foreign labour force drawn to the Netherlands by the Whaling industry was considerable.⁸⁴

Geographic origins of V.O.C. personnel is also hard to figure out for the period 1602-1622. Because of the aforementioned lack of muster rolls of this period there are no sources available who project a reliable figure. However there are sources about the origins of the employees of the *Oude Compagnie* of the fourth fleet from 1599.

In 1599, of the seafaring personnel that took sail with the *Oude Compagnie* 25% lived in Amsterdam, 39% came from the rest of Holland North of the Y, 17% was born in the Wadden areas and only 9% were immigrants.⁸⁵ In the early years of the company labour supply still seemed to satisfy the V.O.C. labour demand because in 1607 5% of the employees consisted of foreigners.⁸⁶

When we compare these numbers with those from V.O.C. personnel in Amsterdam during the 1640s we see that where in 1599 80% of the personnel came from the old core-region (Amsterdam, North Holland and the Wadden areas), in the 1640s this number declined

⁸³C. A. Martijn, S. Barkham, and M. M. Barkham, 'Basques? Beothuk? Innu? Inuit? or St. Lawrence Iroquoians? The Whalers on the 1546 Desceliers Map, Seen through the Eyes of Different Beholders' in: *Newfoundland studies vol 19-1* (2013) 194.

⁸⁴ K. Davids, 'Maritime Labour' 50-52.

⁸⁵ H. Ketting, *Leven, Werk en Rebelle*, 43.

⁸⁶ C. van Bochove, T. van Velzen, *Loans to salaried employees*, 21.

to only 40%.⁸⁷ According to Ketting, absolute decline of the number of employees from the old core-region was almost non-existent because the labour demand in 1640 was almost four times higher than in 1599. Thus the decline of personnel from the old core region was more relative rather than absolute and was most likely caused by the growing hunger labour demand of the V.O.C.. This constant need for more personnel also caused a high influx of foreign immigrants being employed in the V.O.C. because they were almost guaranteed to get a job on board of a V.O.C. vessel. Between 1599 and 1630 the percentage of foreign personnel grew from 9% to 28% proving that the labour demand of the V.O.C. could no longer be satisfied by the local labour market.⁸⁸ However the V.O.C was not the only branch attracting an increasing number of immigrant labourers, the economy of the Republic was flourishing and a wide span of sectors were expanding in size.

However true the reason of the increase of foreign employees might be Ketting does seem to overlook an important reason. When comparing the *Oude Compagnie* with the V.O.C. one must not forget the differences when it comes to the goals they set in Asia. Where the *voorcompagnieën* were focussed on quick retour journeys to India focussed primarily on trade, the V.O.C. had set some more long distance goals which required sailors and soldiers to stay in the Indies for a longer period of time. These prolonged stays in India brought severe risks which might have had a scaring effect on potential employees, causing the willingness of Dutch sailors to board a V.O.C. ship to go down.

⁸⁷ H. Ketting, *Leven, Werk en Rebelle*, 43.

⁸⁸ H. Ketting, *Leven, Werk en Rebelle*, 43-44.

Heterogeneous labour market

For the sea fisheries the argument can be made that they formed their own internal segment of the labour market. Steady labour relations between coxswain and crew were present and re-enlistment rates were high. Only if the fisheries were unable to work due to political changes they would take a job in the Navy or in the V.O.C..

Secondly, the internal mobility within the merchant marine was higher than in the sector of the sea fisheries but still recruitment was mostly based on personal relations. And external mobility was low and therefore one could speak of an internal segment of the maritime labour market.

The matter in the V.O.C. and Navy was slightly different. In both the V.O.C. and the Navy the coxswain firstly tried to find acquaintances to hire. However, during the course of the period 1602-1622 labour demand of the V.O.C. grew significantly and thus more and more personnel had to be found outside of this internal segment. This was clearly demonstrated by the growth in foreign employees in the V.O.C. in 1607 and 1630. These recruits would fit the description of the external segment as described by Davids. Also the low re-enlistment rate of the V.O.C. would have the unavoidable consequence that each year new employees had to be recruited. This aspect strongly indicates that the internal segment would soon be depleted and new labourers from the hinterlands had to be hired. However the clear distinction between internal and external less clear than Davids portrays it to be, especially during this early period.⁸⁹

⁸⁹ K. Davids, *Maritime Labour*, 62.

Conclusion.

As we have seen, the maritime economy in the Netherlands was of unprecedented size compared to the rest of Europe. In the early seventeenth century the biggest employer within this labour market was the merchant marine. With the sea fisheries, whaling industry and Navy also battling for the same type of employees the V.O.C., as a new-comer, had to conquer their spot.

In the first 8 years of the company the number of employees the V.O.C. sent out fluctuated widely. Therefore, the role of the V.O.C. in the maritime labour market was rather small of unstable. However the employments level saw a steady rise after 1610 and this is where can see a transition phase being entered of a large company growing larger and demanding more from the maritime labour market.

The presence of the V.O.C. in the labour market was bigger than the pure figures seem to show. Re-enlistment rates in the other branches were much higher than those of the V.O.C., were only 13% re-enlisted between 1602 and 1622. Because of this the V.O.C. was in higher need of new employees each year than the companies active in the other branches, especially in the sea fisheries repatriation rate were extraordinarily high.

Salaries of the able seamen in the V.O.C. were lower than in the other branches, however the total income was higher due to several secondary arrangements. The fact that the wages of the V.O.C. did not follow the same line as the other branches, where wages increased steadily, shows that the V.O.C. must have been able to satisfy their labour demand. However, high risks and high amount of service years employment in the V.O.C. was not particularly attractive. To overcome these shortcoming the V.O.C. made clever use of its administrative powers and brought several financial tools into existence. By distributing two months' worth of pay as *handgeld* even the poorest were able to take service in the V.O.C.. *Transport letters* enabled foreigners to pay for housing while they awaited boarding and also

brought up the opportunity for married men to provide income for their families. Especially selling the *transport letter* was an ingenious way of insurance for the possible death of the employee. And lastly the three months' worth also was a clever mechanism to attract married men by ensuring at least some income for the stay-behind family. This way the V.O.C. was able to enlarge their potential labour force substantially.

The size of the V.O.C. was less noticeable when one looks at the recruitment policy and compares it to the other branches. At first the V.O.C. also made use of what Davids would call the internal labour market, with the coxswains hiring personnel via personal ties. However this changed over time due to a steady increase in labour demand. The increase of foreign employees from 7% in 1607 to 30% in 1630 indicates that a growing number of employees had to be attracted from the hinterlands. How this increase is spread over time is food for further research. However an increase of this scale does probably not happen overnight and chances are that this growth already started to take place after 1610 when the annual labour demand rose exponentially.

Overall, by making use of smart financial tools, the ever growing number of employees and the increase of immigrant labourers all seem to indicate that the V.O.C. made a clear transition. Where until 1610 they only periodically needed substantial number of employees, after 1610 annual labour demand kept increasing and immigrant labour was more and more attracted. Thus the V.O.C. seems to have grown from a mere participant of the maritime labour market to an influencing player.

Bibliography

- Akveld, L., *Machtsstrijd om Malakka: De reis van VOC-admiraal Cornelis Cornelisz. Matelief naar Oost-Azië, 1605-1608* (Zutphen 2013).
- Bochove, van, C. van, Zanden, J.L. van, 'Two Engines of Early Modern Economic Growth? Herring Fisheries and Whaling during the Dutch Golden Age (1600-1800)' in S. Cavaciocchi (ed.) *Ricchezza del Mare secc XIII-XVIII.*(Le Monnier 2006)
- Bochove, van, C., Velzen, van, T., *Loans to salaried employees: the case of the Dutch East India Company, 1602-1794* (Oxford, 2013) 21.
- Booy, de, A., *De Derde Reis van de V.O.C. naar Oost-Indië onder het beleid van Admiraal Paulus van Caerden, uitgezeld in 1606 Deel 1* (Den Haag1968).
- Bruijn, J.R., Lucassen, J. (eds.) *Op de schepen der Oost-Indische Compagnie, vijf artikelen van J. de Hullu* (Groningen 1980).
- Bruijn, J.R., 'De vaart in Europa'in: *Maritieme geschiedenis der Nederlanden II* (Bussum 1977).
- Bruijn, J.R., 'De Personeelsbehoefte van de V.O.C. overzee en aan boord, gezien in Aziatisch en Nederlands perspectief ' in: *BMGN – Historical Review of the Low Countries* vol. 91 – No. 2 (1993)
- Bruijn, J.R., Gaastra, F.S., Schöffner, I., *Dutch Asiatic Shipping in the 17th and 18th Century, Volume I Introductory volume* (Den Haag 1987).
- Bruijn, J.R., Gaastra, F.S., Schöffner, I., *Dutch Asiatic Shipping in the 17th and 18th Century, Volume II Out-Bound Voyages from the Netherlands to Asia and the Cape (1595-1794)* (Den Haag 1979).

- Bruijn, J.R., Gaastra, F.S., Schöffner, I., *Dutch Asiatic Shipping in the 17th and 18th Century, Volume III Homeward-bound voyages from Asia and the Cape to the Netherlands (1597-1795)* (Den Haag 1979).
- Colenbrander, H.T., *Coen, bescheiden omtrent zijn bedrijf in Indië* (Den Haag 1919)
- Dam, van, P., *Beschrijvinge van de Oostindiesche Compagnie Eerste boek, Deel 1* (Den Haag 1927).
- Deursen, van, A.TH., *Resolutiën der Staten Generaal Nieuwe Reeks 1610-1670, Eerste Deel 1610-1612* (Den Haag 1971).
- Davids, K., ‘Maritime Labour in the Netherlands 1570-1870’ in: P. C. van Royen, J. R. Bruijn, J Lucassen, ‘*Those Emblems of Hell*’? *European sailors and the maritime labour market, 1570-1870* (Newfoundland 1997).
- Gelder, van, R., *Duitsers in Dienst van de V.O.C. (1600-1800)* (Nijmegen 1997) .
- Gelderblom, O. Jonker, J., Jong, de, A., *The Formative Years of the Modern Corporation: The Dutch East India Company: VOC (1602-1623)* (Utrecht 2012).
- Iongh, de, D., *Het Krijgswezen Onder de V.O.C.* (Den Haag 1950).
- Ketelaars, M.P.A., *Compagniedochters: vrouwen en de V.O.C. (1602-1795)* (Amsterdam 2014).
- Ketting, H., *Leven, Werk en Rebelle aan boord van Oost-Indië vaarders* (Amsterdam 2005) 56.
- Lucassen J., ‘The international Maritime Labour Market (Sixteenth-Nineteenth Centuries) in: P. C. van Royen, J. R. Bruijn, J Lucassen, ‘*Those Emblems of Hell*’? *European sailors and the maritime labour market, 1570-1870* (Newfoundland 1997).
- Lucassen, J., *Naar de Kusten van de Noordzee, trekarbeid in Europees perspectief, 1600-1900* (Utrecht 1984).

- Martijn, C. A., Barkham, S., Barkham, M. M, 'Basques? Beothuk? Innu? Inuit? or St. Lawrence Iroquoians? The Whalers on the 1546 Desceliers Map, Seen through the Eyes of Different Beholders' in: *Newfoundland studies. vol 19-1* (2013)
- Prak M., *Gouden Eeuw, Het Raadsel van de Republiek* (Amsterdam 2012).
- Royen, P.C., *Zeevarenden op de koopvaardijvloot omstreek 1700* (Amsterdam 1987)
- Rietbergen, P.J.A.N., *De eerste landvoogd Pieter Both (1568-1615) : gouverneur-generaal van Nederlands Indië Deel II (1609-1614)* (Zutphen 1987).
- Vliet, A.J. van, *Vissers en Kapers, de Zeevisserij vanuit het Maasmondgebied en de duinkerker kapers (ca. 1580-1648)* (Den Haag 1994)
- Vries, de, J., A. van der Woude, *The First Modern Economy, Succes, failure and preserverence of the Dutch economy, 1500-1815* (Cambridge 1995).
- Vries, de,J., *A Quantitative Analysis of the Cape-Route Trade, 1497-1795* (Berkeley).
- Wit, de, A., *Leven, Werken en geloven in zeevarende gemeenschappen, Schiedam, Maassluis en Ter Heijde in de zeventiende eeuw* (Amsterdam 2008).

Appendix 1.

Outbound																								Ships	avg	Tot.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23				
1602 Tonnage	240	400	760	320	600	500	700	320	50	360	360	580	240	540	800												
Crew	62	110	159	70	112	126	137	70	20	70	70	125	62	125	182										15	100	1500
1603 Tonnage	700	300	900	60	300	500	360	700	250	700	700	500															
Crew	130	60	160	20	60	120	70	130	50	130	130	120													12	98	1180
1604 Tonnage	260																										
Crew	62																								1	62	62
1605 Tonnage	240	540	600	700	600	320	700	540	700	220	540	400															
Crew	62	104	127	144	124	85	148	156	179	76	143	100													12	120	1448
1606 Tonnage	600	700	340	420	340	700	700	760	500	260																	
Crew	112	137	70	110	70	137	137	159	126	60															10	112	1120
1607 Tonnage	700	800	140	500	700	140	800	140	800	700	400	140	700	800													
Crew	100	200	60	140	140	60	200	60	200	160	120	60	160	200											14	132	1860
1608 Tonnage	250	80																									
Crew	70	18																							2	44	88
1609 Tonnage	120																										
Crew	50																								1	50	50
1610 Tonnage	800	100	340	240	540	600	700	600	260	400	700																
Crew	110	30	55	55	100	100	100	100	99	70	95														11	83	914
1611 Tonnage	800	900	80	300	340	50	700	140	400	500	340	160	500														
Crew	100	110	30	60	70	20	137	60	110	126	70	60	126												13	83	1079
1612 Tonnage	700	800	500	500	700																						
Crew	137	182	126	126	137																				5	141	708
1613	300	700	360	?	240	800	800	800	1000	800	800	300															

Appendix 2.

Homeward																						Tot.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Ships	
1602 Tonnage	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
Crew	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
-15.2%	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
1603 Tonnage	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
Crew	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
-15.2%	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
1604 Tonnage	240	320	?	110	540	700	800	540	?	320	360											
Crew	57*	78*	69*	25*	100*	110*	115*	100*	72*	78*	78*											
-15.2%	48	66	58	21	84	93	97	84	61	66	66										11	744
1605 Tonnage	360	240	360/440	760																		
Crew	78*	57*	78*	115*																		
-15.2%	66	48	66	97																	4	277
1606 Tonnage	500	260	700	700	700	700	400/500	500														
Crew	94*	57*	110*	110*	110*	110*	85*	94*														
-15.2%	79	48	93	93	93	93	72	79													8	660
1607 Tonnage	900	600																				
Crew	120*	102*																				
-15.2%	101	86																			2	187
1608 Tonnage	700	540	250	600	400	700	700															
Crew	110*	100*	57*	102*	75*	110*	110*															
-15.2%	93	84	48	86	64	93	93														7	561
1609 Tonnage	700/900	340	700	540	260																	
Crew	115*	78*	110	100*	57*																	

-15.2%	97	66	93	84	48															5	388		
1610 Tonnage	700	500	340	600/800	400																		
Crew	158#	95*	78*	110*	75*																		
-15.2%	133	80	66	93	64																5	436	
1611 Tonnage	800	700	700	340	800	700																	
Crew	115*	110*	110*	78*	115*	110*																	
-15.2%	97	93	93	66	97	93																6	539
1612 Tonnage	800	800																					
Crew	115*	115*																					
-15.2%	97	97																				2	194
1613 Tonnage	700/900	800	600	540?																			
Crew	115*	115*	105	100																			
-15.2%	97	93	89	85																		4	364
1614 Tonnage	600	700																					
Crew	102	110*																					
-15.2%	86	93																				2	179
1615 Tonnage	280	800	360																				
Crew	57*	115*	78*																				
-15.2%	48	97	66																			3	211
1616 Tonnage	300#	800	800	280																			
Crew	68*	115*	115	57*																			
-15.2%	57	97	97	48																		4	299
1617 Tonnage	320	280	1000	800	800																		
Crew	78*	57*	125*	115*	115																		
-15.2%	66	48	106	97	97																	5	414
1618 Tonnage	360	300	700	500	500/600	300	700																
Crew	78*	78*	110	94*	94*	78*	110*																
-15.2%	66	66	93	80	80	66	93															7	546
1619 Tonnage	300	400	800	800	800																		
Crew	78*	75*	115*	115*	115*																		
-15.2%	66	63	97	97	97																	6	420

1620 Tonnage	300	550	320	800	360	800															
Crew	78*	100*	78*	115*	78*	115*															
-15.2%	66	85	66	97	66	97														6	477
1621 Tonnage	300	340	500/600	400/600	800																
Crew	68*	78*	100*	94*	115*																
-15.2%	57	66	85	80	97															5	385
1622 Tonnage	700	300	700	700	700	180	800	800	360	400											
Crew	110*	68*	110*	110*	110*	25*	115	115	78*	75*											
-15.2%	93	57	93	93	93	21	97	97	66	63										10	773
Total																					8054

This table shows information on the total number of voyagers arriving back home per year, per ship. These calculation are made by using an outbound mortality rate of 15.2.