Yards Ahead

How the NSM managed to attract international shipbuilding orders whilst other shipyards built no ships during the Great Depression

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1. Introduction

In 1922, only three countries built a higher tonnage of ships than the Netherlands did, those being Germany, the United States and Great Britain.[1] In the early 1930s, Dutch shipbuilding had just started experiencing the Great Depression, the global economic downturn which led to a decrease in global trade. With that decrease in trade came a downturn in shipping, which had a knock-on effect on shipbuilding. After 1929, Dutch shipbuilding had to scrape by with a limited number of orders from foreign shipping companies, with the few that remained mostly coming from Norwegian customers, decreasing its share of the world export market in shipbuilding to only 4,7% of global tons of ships launched.[2] Additionally, these Norwegian shipping companies only ordered at a few select shipbuilding companies.

This change is interesting because other states with a large shipbuilding industry managed to maintain a sizeable percentage of the world shipbuilding market, whilst Dutch shipyards failed to hang on to their international customers. Most Dutch shipyards did not manage to stay internationally competitive. However, the Nederlandsche Scheepsbouw Maatschappij (NSM) did. This begs the question: What did the NSM do that distinguished it from other shipyards? In this research, I will explore the Dutch shipbuilding industry in the early 1930s and how they performed internationally during the Great Depression.

This thesis will examine how the NSM managed to outperform its national and international competitors with regards to foreign orders from 1929 until 1936, when global shipbuilding was still in an extended slump following the Great Depression. Consequences of the Great Depression on Dutch shipbuilding are a topic that has not previously been thoroughly explored, leaving a gap in the historiography concerning the Dutch shipbuilding industry that this thesis intends to fill.

The period in which these shipbuilding companies will be examined will be 1929-1936. This period completely encapsulates the shipbuilding slump that starts with the Great Depression. This slump forced the shipyards in the Netherlands to change, and this forced change

[1] Lewis Johnman and Hugh Murphy, 'An Overview of the Economic and Social Effects of the Interwar Depression on Clydeside Shipbuilding Communities', *International Journal of Maritime History* 18, no. 1 (1 June 2006): 232.
[2] Hugh Murphy, '"No Longer Competitive with Continental Shipbuilders:" British Shipbuilding and International Competition, 1930–1960', *International Journal of Maritime History* 25, no. 2 (December 2013): 59.

is what makes the current topic so interesting. The Great Depression only started to wane in the Netherlands after the government chose to abandon the Gold Standard, in 1936. Following this, the worst part of the shipbuilding slump was starting to let up, as international trade had started to recover around 1932 and the shipping industries started to catch up as well.

The specific topic that will be researched will be how it came to be that the NSM managed to retain an international clientele, whilst other Dutch shipbuilding companies fared a lot worse in that regard. This thesis aims to find out what it was that set the NSM apart from other Dutch shipbuilding firms. Whether it was a technological edge, better use of institutional connections utilised by the leadership of the firm or something else is what this thesis aims to discover.

Questions

The main question answered in this thesis will be: 'How did the NSM maintain its international competitiveness and outcompete the other Dutch shipbuilding companies during the Great Depression and its knock-on effects on the international character of Dutch shipbuilding?' To answer this question, a few sub-questions must be answered as well.

Firstly: What were the effects of the Great Depression on Dutch shipbuilding? This question needs answering to indicate why the NSM maintaining a relatively high number of international orders was so extraordinary at the time. At the same time, answering the question leads to a clear historic positioning of the time period. These effects show what all shipyards in the Netherlands had to overcome, establishing a similar position for all of them that elicited different responses from different shipyards.

Secondly: What customers ordered from shipbuilding companies in the Netherlands before and during the Great Depression? This question requires an answer because it will show where the opportunities were that the NSM exploited to remain solvent. This answer might indicate that the NSM had specific contacts different from other shipbuilding firms, making it easier for them to find customers internationally. In addition, it highlights weaknesses and strengths in the operational structure of the different Dutch shipyards. The different customers that the shipyards serviced indicates their vulnerability to economic fluctuations, by highlighting the strength of shipbuilding-shipping company relations.

The third question follows in a similar vein to the first: What types of ships did Dutch shipbuilders build for their customers before and during the Great Depression? This question

indicates whether the continued production of the NSM was due to a uniqueness in ships built, as building a different sort of ship might be an easy way to acquire a larger share of the international market. The interwar period was not merely a time of economic collapse, but also the growth of some sectors. This chapter will examine both the purposes of the ships built, as well as the way in which they were built. Innovations in shipbuilding that might give a shipyard an edge are an important part of this. This combined will show the factors that make a shipyard stand out in the shipbuilding market.

Fourth: In what other ways could and did shipbuilders distinguish themselves? This question will show the NSM did not operate in a vacuum: there were more Dutch shipbuilding companies, multiple of which could cater to international orders. However, most of the others failed to do so in significant numbers, with none of them coming even remotely close to the numbers achieved by the NSM. To answer this question, I will explore what set apart the NSM in a few areas, such as company organisation, international profiling, or institutional connections. A shipbuilding company can distinguish itself in more ways than simply by virtue of their types of ships and established relationships with customers. The answer to these questions will show what other creative ways shipbuilding companies had to acquire orders.

Theoretical Concepts

Competitiveness is the measure in which a firm manages to cater to specific demands of its customers better than another firm does. Tomasz Siudek analyses different theories of competitiveness in his article 'Competitiveness in the Economic Concepts, Theories and Empirical Research'[3], concluding that competitiveness is dependent on a number of factors both within and out of a company's reach. He specifically mentions processes, performance, and network, which will be further evaluated in this research. Public spending and exchange rates are among the factors out of a company's control that Siudek mentions, and these will also make an appearance in this research.[4]

Increasing competitiveness can be done by optimising a specific type of demand to supply customers with, making the same thing as the competitors but doing so more cheaply, faster or

[3] T. Siudek and A. Zawojska, 'Competitiveness in the economic concepts, theories and empirical research', *Acta Scientiarum Polonorum. Oeconomia* 13 1 (2014), 102.
[4] Siudek, 'Competitiveness', 102-103.

making things of a higher quality. Additionally, it might be possible to be more competitive than the competitors in a global market by gaining more name-recognition than them. In effect, competitiveness increases by making a company stand out in the market vis-à-vis its competitors. Competitiveness will play a key role in this thesis, as the significantly higher number of ships the NSM produced for international customers suggests it was more competitive than both its domestic and international competitors.

The interwar period will often be mentioned in this thesis. Though it is not entirely undisputed when this period commences and closes, the period referenced in this thesis will be the roughly twenty years starting with the signing of the treaty of Versailles and ending with the German invasion of Poland, as that corresponds best with the shipbuilding cycles previously mentioned, as well as with the most impactful period for shipbuilding, as the Versailles treaty made clear what the post-war situation would be, allowing shipbuilders to operate in it, and the German invasion of Poland was a clear end to the restoration of international trade.

Literature Report

The interwar period was a tough time for the Dutch shipbuilding industry. After a brief bust in the early 1920's and a short recovery, the Great Depression heralded a sustained and significant decrease in demand for new ships worldwide, affecting the internationally oriented Dutch shipyards in major fashion. Many of the shipyards had to resort to alternatives to foreign-placed orders, having little to no international demand for new ships. One firm however, the NSM, built over a dozen ships for foreign customers, compared to just seven from all other shipyards combined.[5] This discrepancy is a key area of interest of the present research, as existing research does not show how the NSM managed to attract these international contracts whilst other firms did not.

A few approaches to examining the edge the NSM held over other shipbuilding companies will be taken. The most important of these are the institutional and the technological approach. With the institutional approach, the interwovenness of different political and societal institutions with different shipbuilding firms is meant, as well as any government intervention intended to influence the manner in which shipbuilding companies acquire their orders. By the technological

[5] J.W. Bonebakker, *De Scheepsbouwnijverheid in Nederland* (Haarlem: De Erven F. Bohn N.V., 1936).

approach, an approach emphasising the innovation and modernity of different yards is indicated. This approach seeks to explain the differences between different companies from a view of competitiveness, expecting the firm with the technologically superior ships and/or shipbuilding facilities to be more attractive to foreign shipping companies.[6]

This latter approach is investigated by Mila Davids, who also makes it clear there was a significant decrease in orders and mentions specific amounts. One of the relevant observations and argument that Davids makes is that before 1934, there was fairly little in the way of cooperation on design and related areas between different Dutch shipbuilding firms. This can be an indication of why some stayed more competitive than others during a low point in international shipping trade.

Davids, in cooperation with Hans Schippers, has also written about competitiveness in relation to the Dutch shipbuilding industry as well, arguing that shipbuilding firms are often very dependent on cooperation and established connections with different groups of customers and experts.[7] They argue that innovation is a driver behind competitiveness and that innovation is attained by means of 'interactions between institutional and organizational elements, which together we call "systems of innovation."' This approach takes innovation as a central concept, and argues innovation processes take time to develop, are path-dependent, meaning they change a lot depending on who performs them and how, and the systems are open-ended, meaning there is no clear point that the innovation processes work towards, rather leaving space for a divergence of difference outcomes.

This 'systems of innovation' approach is an interesting way of looking at the industry of shipbuilding, and therefore noteworthy in the context of this research on the competitiveness of Dutch shipbuilding companies. It is of interest to take the concept as Davids and Schipper construct it and use it to look at the different Dutch shipping companies in the interbellum to see if there is a noteworthy difference between the NSM and other Dutch shipbuilding companies in the way they were positioned in these systems. As can be expected from two articles by the same

[6] Mila Davids, *Knowledge circulation in the Netherlands. The co-evolution of the knowledge infrastructure and innovations in Dutch business in the 20th century: shipbuilding* (Eindhoven University of Technology, June 2004).
[7] M. Davids and H. Schippers, 'Innovations in Dutch Shipbuilding: A Systems of Innovation Approach' *Business and Economic History On-Line* 1, 2003.

author, the article by Davids and Schipper closely follows the line of thinking that Davids follows in her other mentioned article: that innovation in shipbuilding is essential to stay competitive. In the article written in collaboration with Schippers however, more emphasis is placed on the different ways of innovating. Innovation does not merely mean the development of specific techniques, but also the way in which an organisation like a shipyard is organised, like the way workers are hired.[8]

In his dissertation on the role of mayor de Vlugt of the city of Amsterdam, Harm Kaal also mentions the role of the mayor in helping firms like the NSM acquire new (international) contracts for smaller ships from Saint Petersburg in times when it was hard for firms themselves to attain these orders. The mayor of Amsterdam visited the Soviet Union, allowing him to help acquire orders for the Dutch shipping firm he was formally representing. Officially this was because the NSM director himself was indisposed, but it is not unthinkable it had to do with the implications of sending a government official to a country that finds itself internationally isolated and, in this way, can be constructed as a way in which institutional and organisational actors work together to achieve progress for their shared interests. The people of the city of Amsterdam being the group of people that profited from this in not losing their livelihoods because of economic downturn.[9]

The research of Kaal in relation to the research of Davids and Schipper can also be seen as fundamentally different, as the approach to competitiveness from Davids and Schipper is one primarily based on innovativeness, whereas the argument that Kaal provides is one of institutional involvement in private business. Kaal's approach, therefore, both contradicts as well as supplements Davids' research on innovation. Cooperation figures prominently in both of their accounts of the period, but where Davids and Schipper argue that what gives a firm an edge over it rivals is the way it operates and innovates through the systems of innovation that they mention, the research by Kaal seems to suggest it is additionally useful for firms to be politically connected to acquire a niche in the market. He explicitly mentions the travel of the mayor of Amsterdam on behalf of the NSM is in all likeliness not because of the indisposition of the actual director of the

[8] Davids and Schippers, 'Innovations in Dutch shipbuilding', 1-3.
[9] H. Kaal, *Het Hoofd van de Stad* (De Vrije Universiteit, Amsterdam, February 2008), 129-174.

company (although this director may have very well been indisposed, being in London) but because the political weight it carried to have a government official, even just the mayor of a capital in lieu of a minister of representative of the national government, might have very well given the NSM the leverage it needed to acquire new orders from international buyers. This would facilitate the NSM staying afloat in an international market that other Dutch shipbuilding companies could no longer access. It is therefore interesting to compare and contrast what happened with the NSM to the way government officials interacted with the other Dutch shipbuilding companies in the interwar period to see if similar missions were undertaken or if other shipbuilding companies could not rely on the sort of government support the NSM received.

However, at this point, the Dutch-focused research into this topic starts to thin. Dutch shipbuilding in the interwar period has not been an interest for many researchers, leaving very little actual literature on Dutch shipbuilding industry in the time. In comparison, British shipbuilding in the interwar period has been far more thoroughly documented. As with the Dutch case, British shipbuilding took a hit after the Great Depression. The British and Dutch shipbuilding industries are not carbon copies of one another, but they are comparable, as both were internationally oriented in states with a large seafaring heritage and neither one of the two states' shipbuilding sectors were harmed too much by the First World War. This means that, whilst not being a perfect comparison, it is still possible to compare the two.

In the British case, Edward Lorenz emphasises different reasons for the lack of competitiveness internationally on a basis of organisation and supply. This means Lorenz does not look at technological innovation like Davids and Schippers did, nor does he consider institutional benefits in working together with local or national government benefitting specific shipyards. Instead, he argues that the British decline in competitiveness was due to the lack of standardisation. This entails that the British shipyards were delivering well-crafted and individually designed ships, specifically for the needs of the ordering party. This stands in shrill contrast to the Dutch and Swedish producers, he argues, who had a more standardised approach to shipbuilding, allowing them to remain more internationally competitive. Standardised ships

were easier and cheaper to build as it was possible for companies to tailor their shipyards specifically to the building of specific designs of ships.[10]

It is interesting that Lorenz considers the Dutch as one of the states that remain more internationally competitive, considering the drop in international orders most Dutch shipbuilding firms experienced. It is likely that the Dutch share of the international market stayed relatively high compared to the British share, which dropped by a lot, whereas Dutch firms built fewer tons of ships for the international market after the Great Depression. The entire world market shrinking meant it was possible for Dutch shipbuilders to retain a similar percentage of the world market for ships, despite the absolute tonnage of ships constructed dropped.

Relatively similar is the account of Hugh Murphy, which indicates that European shipbuilders were more and more competitive with British shipbuilding. Murphy writes about how lower production costs allowed continental shipbuilders to produce ships cheaper and faster than British shipbuilders were able to. However, this is not all Murphy describes. He also details that continental shipbuilding was more competitive than British shipbuilding was. One of the primary reasons for this he names is economic nationalism. He does not specify what economic nationalism entails, but other authors do. Lorenz writes that many continental states subsidised their shipping firms, indirectly subsidising their shipbuilding companies. It is also possible that the institutional involvement hinted at in the writing by Kaal details a similar economic protectionism, promoting Dutch business interests by lending political legitimacy to the shipbuilding companies they represented.[11]

Another problem that Murphy describes is one that connects, rather than divides, the British and the Dutch cases. Murphy argues that the large diversity in British shipbuilding companies was detrimental to the international trading position, as different firms only cooperated on labour matters, never on shipbuilding matters, decreasing the efficiency of the industry as a whole. This situation, with different firms competing for orders and not working together to pool their resources, is very similar to the situation in the Netherlands, where different firms also had to compete for international orders. The British solution was for the

[10] Edward H. Lorenz, 'An Evolutionary Explanation for Competitive Decline: The British Shipbuilding Industry, 1890–1970', *The Journal of Economic History* 51, no. 4 (December 1991), 911–935.
[11] Hugh Murphy, 'No Longer Competitive', 35–60.

shipbuilding companies to work together and, combining their resources, secure a way to eliminate rivalry between the different companies. This is not something many Dutch shipbuilding companies did, but it might be interesting to see how far the Dutch cooperation between shipbuilding firms went.

An additional reason the Dutch shipbuilding industry failed to maintain incoming international orders is given by Barry Eichengreen and Douglas Irwin. In their article on international trade in the interbellum and states' reactions to the Great Depression, they examine the particularities of countries and their holding onto or letting go of the Gold Standard.[12] They argue that maintaining the Gold Standard was one of the crucial factors in imposing protectionist trade barriers such as tariffs. Their argument for this is that it was one of the few crude ways in which governments were able to keep companies in their own country solvent, whereas countries that abandoned the Gold Standard had fewer reasons to resort to tariffs, as their economies were more flexible. In both cases clear examples are present of states to which these conditions applied: Germany imposed tariffs, and Dutch shipbuilding for German shipping companies decreased markedly during the Great Depression.[13] Norway moved off of the Gold Standard, indicating a more international stance, which sees some confirmation in the Norwegian orders at Dutch shipbuilding firms, or at the NSM at the very least. Interestingly, the Dutch response to the international slump was to hold on to the Gold Standard, possibly explaining the slump in international orders for most shipbuilding companies as well, due to Dutch protectionism and instituted barriers to trade dissuading customers from buying Dutch.

The Norwegian response to the Great Depression decrease in international shipping is particularly interesting, as the vast majority of international orders of the NSM during the Great Depression came from Norway.[14] Therefore, the analysis of Tenold and Brautaset of Norwegian shipping from 1850-2000 gives a good indication of what happened in the interwar period that made the Norwegian shipping companies order more ships internationally than other states'

[12] Barry Eichengreen and Douglas Irwin, 'The slide to Protectionism in the Great Depression: Who Succumbed and Why?', *National Bureau of Economic Research* (February 2010).
[13] The Excess Insurance Company, *Lloyd's Register of Shipping 1936 Steamers* (London 1936).
[14] J.W.F. Werumeus Buning, *Veertig Jaar NSM* (25 August 1934) 85-92.

shipping companies did.[15] They argue that the Norwegian shipping companies catered to demand by having in their arsenal many modern tanker ships, that were in high demand, whilst demand for other types of shipping declined. This, as a consequence, they argue, of structural changes to world trade. Norwegian shipping companies managed to correctly foresee these structural changes, which made them able to more aptly respond to the new demands the market was placing on them. This would explain why Norwegian shipping companies ordered ships in different states as well: they had found a segment of the market in which a rise in demand, rather than a decline, was taking place, enabling them to order ships internationally to fulfil that demand.

The Norwegian case is interesting insofar as that it offers an indication of why the one Dutch shipbuilding company that managed to attract foreign orders attracted many Norwegian orders. Norwegian shipbuilding companies, according to Stig Tenold, found an opening in the world shipbuilding market in the middle 1920's by starting to build tankers for international oil companies, who habitually outsourced their shipping to foreign companies. [16] Consequently, the Norwegian merchant fleet grew exponentially in the interwar period, with tankers taking up much of this growth. This increase in building tankers led to a corresponding increase in shipping companies exploiting tankers. These companies required ships, starting to increase the demand from Norwegian shipping companies for ships that were no longer merely of Norwegian make. These are the sparse international orders for ships the NSM serviced most often. Still, an interesting question remains to be answered: Why was it the NSM, and not another shipbuilding company, that received these orders?

Whilst the Norwegian increase in total tonnage was largely reliant on accessing a new market, that for tankers, the British shipping in coal, which amounted for a large amount of the British exports, was largely on the decline for the entire interwar period. Jan Tore Klovland has, upon analysing monthly coal transport indices, found that the Great Depression was not a normal recession in the sense that it not only laid waste to shipping, (as usually happens in a shipping

[15] Stig Tenold and Camilla Brautaset, 'Globalisation and Norwegian Shipping Policy, 1850–2000', *Business History* 50, no. 5 (5 August 2008): 565–82.
[16] Stig Tenold, 'Crisis? What Crisis? Norwegian Shipping in the Interwar Period', *Norwegian Shipping in the 20th Century* (London: Palgrave, 2018), 91–131.

cycle) but that it was a far more sustained decrease.[17] British coal shipping did not recover until 1936, four years after the rest of the world economy had started growing again. In part this can be explained by the increasing obsolescence of coal shipping in a global economy increasingly dependent on oil. It also, however, illustrates that there were plenty of sectors that were unlike the Norwegian tanker boom, where it was not the case that the crisis presented opportunities. The decrease in coal-ferrying demand can be viewed as an explanation for the decrease in foreign orders for Dutch-built ships in the interwar period.[18]

A clear reason for the decrease in international orders for Dutch shipbuilding companies is the decrease in international trade due to rising costs. When the cost of trade increases, the ordering of new material is often put off until such time as more profitable circumstances present themselves. This increase in the cost of international trade is clearly documented by Jacks, Meissner and Novy. Their data-driven approach to analysing international trade in the interwar period indicates that due to, among other things, protectionist barriers, the costs of international trade skyrocketed following the first years of the Great Depression. They add, however, that tariffs are far from the only things increasing the cost of trade and aim with their article to start filling in the nontariff ways of protectionism, as well as institutional and informal ways of protectionism and the way they influenced the cost of international trade.[19]

Protectionist measures will often be named as a rather vague concept, so an elucidation is in order. When discussing protectionist measures in this thesis, all actions protecting domestic industries at the expense of foreign imports will be meant. This means that protectionism entails both overt measures, such as instituting tariffs and taxes on specific goods to prevent them from competing with domestically produced goods, as well as less overt measures. Less overt measures include things that are seen as institutional involvement, like government officials promoting goods that are made domestically over similar goods from other states, or awarding contracts merely to domestic companies, though, depending on the transparency of the process, that might very well be considered overt protectionism. These measures will, in this thesis, often

[17] Jan Tore Klovland, 'Shipping in Dire Straits: New Evidence on Trends and Cycles in Coal Freights from Britain, 1919-1939', *SSRN Electronic Journal*, 2016.
[18] Klovland, 'Dire Straits.
[19] David S. Jacks, Christopher M. Meissner, and Dennis Novy, 'Trade Costs, 1870-2000', *The American Economic Review* 98, no. 2 (May 2008): 529–34.

be collected under the (mis)nomer of 'protectionist measures', as they are all ways in which a state can protect its own industries from foreign competition.

In his article on the American trade during the depression, Hobart S. Perry also ascribes the decrease in US shipping during the interwar period to protectionist actions of other states' governments. Written in 1937, it is interesting to see the markedly optimistic tone of his article, commenting that, despite losing about half of their customer base, US shipping had increased its share of international shipping in the 30's. He also hints at another reason of why demand for new ships ceased during the Great Depression: A decrease in passengers for passenger travel limited the demand for ships from shipping companies that relied on cross-ocean travel by regular people. A decrease like this is to be expected during an economic downturn, but nevertheless is a clear explanation of why orders from international shipping companies for Dutch shipyards may have ceased in this period.[20]

Similarly, the United States itself did not shy away from protectionist actions. The decline in building for foreign shipping companies can be explained by a phenomenon that John Hutchins explains in his article on American shipping in the interwar period. He explains that American ships prior to the Great Depression had often been built in other states and that many of the lines sailing to and from the US did so under a foreign flag. However, after the Great Depression, the government began promoting more domestic shipbuilding, leading to a quadrupling of the American merchant navy in tonnage between 1914 and 1939. This is not an explanation for the decline in orders for Dutch shipbuilding companies in itself, but it takes away one of the groups that would previously have been placing orders in the Netherlands. The US switching to more domestic shipbuilding might be indicative of a trend that undermined the solvency of Dutch shipbuilding companies, formerly heavily reliant on international orders.[21]

In a similar vein, 40 Jaar NSM points to an increase of Dutch government orders for Dutch shipyards after the initial years of the Great Depression, indicating that the US government was not the only government attempting to save the domestic industry by making it less reliant on

[20] Hobart S. Perry, 'The United States Shipping Industry', *The Annals of the American Academy of Political and Social Science* 193, no. 1 (1937): 88–98.
[21] John G.B. Hutchins, 'The American Shipping Industry since 1914', *The Business History Review* 28, no. 2 (June 1954): 105–27.

foreign companies. In the US case this resulted in a larger domestic industry for shipbuilding for the domestic shipping industries to access, in the Netherlands, this manifested itself in a decrease in foreign orders for Dutch ships, meaning the Dutch government had to place orders to keep the Dutch shipbuilding afloat. Given that this was an internationally turbulent time, they had plenty of reason to do so, by ordering vessels for the navy. These ships are not the primary subject of this research, as it focusses on commercial performance of shipyards.

The different authors in this part all agree that the international character of global trade decreased in the interwar period, and they give different explanations: Eichengreen, Irwin, Jacks, Meissner, Novy and Perry all agree that protectionist measures from different states adversely impacted the shipping industries of countries that were heavily reliant on international trade. Their explanations are in places complementary, and contradictory in other places. Many give tariffs as an explanation for the decrease in global demand for shipping, and therefore, shipbuilding. Others also contribute the decrease in international shipping to other factors, such as an increase in the cost of international trade and other protectionist measures, such as a shift away from foreign-built ships to domestically manufactured ones. This shift took place in the Netherlands in reverse: shifting away from building ships for foreign shipping companies to building ships for domestic customers. In this regard, this trend is interesting in that it affected both states that saw domestic shipbuilding for domestic customers as growth and states that saw it as shrinkage.

It is one thing to say that protectionism exacerbated the fall in global trade that followed the Great Depression. In their article on tramp shipping (shipping without schedule and/or standard ports of call) Saif I. Shah Mohammed and Jeffrey G. Williamson talk about a policy-induced de-globalisation.[22] This is a similar argument to those made by previous authors, claiming that protectionism by states' governments were clear contributors to the loss of international trade, but it goes further, stating that protectionist policies were the basis for this loss. This conflicts with states where fewer protectionist measures, such as Norway, still losing significant parts of their global trading, as mentioned by Tenold in particular.

[22] Saif I. Mohammed and Jeffrey Williamson, "Freight Rates and Productivity Gains in British Tramp Shipping 1869-1950," *National Bureau of Economic Research*, 2003.

Innovative Aspects

Different researchers have given varying reasons for what happened in the interwar period. In this research the differences between Dutch shipbuilding companies, which were hinted at in the articles by Kaal, Davids and Schipper, will be further explored.[23] The dearth in academic writing on this specific part of interwar shipbuilding will be alleviated by this thesis.

Switching from the supply to the demand side of shipbuilding, this thesis will also attempt to find out why Norwegian – and other – shipping companies chose the NSM over other Dutch shipbuilding firms, explaining why, though there were twenty ships built for non-Dutch customers, more than half of these were built by only one shipyard. Especially crucial in this part of the research will be the writing of Stig Tenold on the Norwegian shipping industries, as well as the Norwegian merchant navy.[24]

The explanation for the relative success of only one shipyard will also be explored through the manner in which it dealt with increasing barriers to international trade and its effects on the shipping and therefore the shipbuilding industry. In this way it will be positioned in the research by the different authors examining the ways in which the Great Depression decreased global trade and the way in which different states reacted to this phenomenon.

The shipbuilding industry in the Netherlands is a sorely lacking subject in the different literature discussed in this literature review. It is unclear how it survived the Depression and it is unclear how the Depression had an impact on what kind, size or type of ships that were built in that time. The Dutch shipbuilding industry suffered badly from the Depression, which is clear from the context to the British situation that is provided by different British writers.[25] The most thorough review of interwar shipbuilding in the context of the Great Depression and the opportunities it provided, in addition to the negative consequences it had, are on the Norwegian case.[26] The Norwegian shipping growth in the interwar period was partially dependent on foreign shipyards capable of building these ships, meaning the Norwegian case is linked to Dutch

[23] Kaal, *Hoofd van de Stad*; Davids and Schipper, 'Innovations in Dutch Shipbuilding'.
[24] Tenold, 'Crisis? What Crisis?'.
[25] Neil K. Buxton, "The Scottish Shipbuilding Industry between the Wars: A Comparative Study," *Business History* 10, no. 2 (1968): 101–120.; Murphy, 'No Longer Competitive'.
[26] Tenold, 'Crisis? What Crisis?'; Tenold and Brautaset, 'Globalisation'; Lorenz, 'Competitive Decline'.

shipbuilding and begging the question why only one of the Dutch shipyards managed to serve these new customers.

This thesis will start filling the gap in the literature on the Dutch shipbuilding for foreign customers that currently exists. The Dutch shipbuilding industry has not been analysed in the way the British has, and, whilst the Dutch shipbuilding industry bears some resemblances to the British, it was different in its recovery from the Great Depression and in its catering to international customers during its recovery. This research will therefore contribute by looking at a rarely-studied case and linking it to existing literature.

This research will also explore the limits of increased competitiveness of a company. The Crisis Years were a tough time for shipyards, and even the NSM, as the largest Dutch shipyard, had to cut back on personnel and other costs during this time. The NSM managed to attain orders whilst other shipyards did not, but in researching these, the naïve position that attaining orders meant no negative consequences of the crisis were experienced, must not be taken.

There are different studies, like the ones from Davids, that pay attention to innovations in shipbuilding and how shipbuilders implemented these. Davids also looks at whether shipbuilding companies were at the forefront of innovation of merely adopters of existing technology. This present research will go into detail where other studies have not, and indicate what effects adopting innovations might have had to explain the difference between the performance of different companies.

Sources

The sources used will be the archives of different shipbuilding companies, like the NSM, RDM, and Wilton-Feijenoord, in these archives I will be examining the building lists of the different companies, in order to find out the different companies that ordered ships from Dutch yards. These will be cross-referenced with the Lloyd's register to get a complete overview of numbers and types of ships built. This process will reveal which ships that were laid up were also taken into use and delivered to the relevant shipping companies. Specifically, the yearly (financial) reports, written by the board addressing the shareholders of the different companies, will be used to illustrate the different positions the shipbuilding companies were in. There are, of course, remarks to be made about these sources. The primary reason for using the yearly reports is that they are a valuable insight into how the shipyards performed, with a high frequency of publishing,

and they're available. The downside of using of the yearly reports is their intended audience. The board of a company has an incentive to present a positive outlook towards their shareholders when times are tough on account of potential divestment. As long as the company appears healthy, investors will treat said company as being healthy. This means that the company in question has the potential to stay in business, in spite of disappointing results. Nowadays, there are rules against this sort of thing, but at the time of the publication of these reports, these were not yet established, accounting for certain oddities in the reports.

Nevertheless, the reports are a valuable source of information, as they provide a continuous, and available, look into how the different companies were performing at the time. The incongruencies in the bookkeeping by the board of the different companies can be accounted for by not only taking the yearly reports as a source at face value, but by comparing the trends visible in the yearly reports of consequent years. If the depreciation of the company's assets wildly fluctuates between good and bad years, that is a clear indication that the company's board is trying to make the situation seem better than it is. The potential pitfalls of using the yearly reports are largely avoided by looking at the situation not just during the Great Depression, but before the Depression as well, so as to have a sort of control group to see the potential discrepancies to be found in the reports. This way, the reports, although not wholly trustworthy at face value, can still be used.

Other sources will be searched for by the companies that ordered ships rather than producing them themselves. Regarding information on foreign ordering parties, sources will be searched at the Maritime Museum in Rotterdam. This is mostly the case for Norwegian shipping companies, which were the primary parties ordering ships. For domestic orders and why these were granted to domestic shipyards, sources will be searched in their own archives.

For both the NSM and the RDM, commemorative books were written at times their respective companies existed for 40 and 50 years. These books will be used to examine the positions the owners of the shipyards themselves held when reviewing the meagre years their companies had survived. These accounts will be biased, and bear a top-down view of the happenings of a shipyard, as they were written at the behest of those controlling the companies,

yet their contribution to this research must not be discounted, as the owners did experience the Crisis Years and the dearth of work is mentioned in both of the commemorative books.[27]

In addition to the reports issued by the shipbuilding companies themselves, for the public perception of the shipyards and their activities, this research will use newspaper articles of the time to examine what different groups thought about the shipyards. The shipyards business in time of crisis was often topic of interest in the papers. As the yearly reports have an incentive to publish positive results, newspaper articles can be a useful addition as a more impartial source of judgement on the shipyards' solvability.

Different newspapers at the time were highly politicised with regards to target audience and intended message. This means that not all newspapers will interpret news the same way. Whilst it is true that the different papers held different perspectives, this is actually in the interest of this thesis, as it shows the public perception of the actions of shipyards in different lights. Therefore, although newspapers on the right and left of the political spectrum had their motivations in writing positive or negative reviews of actions taken by those representing the shipbuilding companies, these coloured perceptions are useful to examine the way people thought of the way they conducted business.

Methodology

In this thesis, the NSM and internationally less successful competitors will be examined to find out what it was that made the NSM so much more successful than its domestic competitors at managing to achieve orders from non-Dutch shipping companies, especially of those in Norway. In the period from 1932-1935, Wilton-Feijenoord built 3 ships for shipping companies that were not from the Netherlands themselves, whilst the NSM in the same period built 13. Other shipyards did not produce nearly as many ships as the NSM did in this period, which begs the question 'Why did the NSM manage to build so many more ships than any other shipyards did?'

This question will be answered primarily by examining the reports of the shipyards themselves, in which they explain what the results of the past years were and how the yards are doing. In addition, the Lloyd's register will be used to see which shipyards built ships for which (foreign) clients. The size of the ships can be found there as well as some of their specifications.

[27] Bruning, *40 Jaar NSM*; RDM, *Een halve eeuw "Droogdok", 1902-1952* (Rotterdam, 1952).

These can help in deciding for what purpose different ships were built. Other sources, such as the websites of volunteers detailing their previous places of work will be used as well, to collect images of the ships that are relevant to this research.

The yearly reports the shipyards wrote will be used to examine the way the shipyards were performing in very real, financial terms, allowing for the analysis of the trends the yards were part of. Say a shipyard performed far better before the Depression in comparison to during the Depression, that is a clear indication the shipyard was affected, even in the potential absence of figures of employment and the like concerning said shipyard. The shipyards' yearly reports are indicative of how the company board saw the company's performance as well.

A distinction will be made in this research between ships built for commercial customers and ships built for (domestic) military customers. Although all larger Dutch shipyards at the time built military vessels, these contracts were not decisive in helping any of them survive the Great Depression, as well as more difficult to specify, as they do not appear in the primary source used for matching shipyards to ships built, Lloyd's Register.[28] With regards to the NSM and its business practices, the Amsterdam city archive is an invaluable addition to source material. Most specifically, the city archive documents the decision-making process of the Amsterdam city council with regards to a few key decisions surrounding the NSM's acquisition of orders.

[28] Excess Insurance, *Lloyd's*.

2. What were the effects of the Great Depression on the shipbuilding industry?

During the 1920's, economies all around the world experienced an upturn that started to overcome the negative effects the First World War had had on global trade. The improving economic situation in this period did, however, mask negative tendencies that were part of the economic climate. For instance, in the agricultural sector, particularly in the USA, prices were very, and profit margins were minimal. This in turn, meant that agricultural enterprises could ill-afford the products of the industrial sector, leading to decreased profitability in that sector as well.

In addition, many of the post-war governments of Europe were in significant debt due to the Great War. As long as the global economy was chugging along, there was a willingness of banks and other countries to loan money to these states to pay of their debts. Paying debt by indebting oneself further is not a sustainable economic model, however, and, in 1929, these underlying tendencies of the market were confronted with the bursting of a financial bubble, as the American stock market collapsed. The collapse of the stock price in the USA was the direct cause for many banks to stop lending people the money they had previously used to buy stocks. Additionally, the banks came to collect their money, which people no longer had, causing many people to have to default on their debt or sell whatever they had to sell.

When countries trying to pay of their debts with new debts could no longer borrow money, drastic action had to be taken. Banks in Germany and Austria started to collapse under the weight of loans they could no longer collect on, and orders from these countries to other countries were suspended. As the British pound was the international currency of choice in this time, the British economy suffered from the effects of suspension of trade in these regions. British banks could no longer collect on debts they were due and started to suffer from a lack of currency, meaning they could also no longer cover their own debts in pounds. People asking for gold for their pounds were soon demanding so much that the Bank of England had to suspend convertibility of pounds to gold, and thus, the Great Depression had crossed the Atlantic and entered Europe.

The Great Depression was a devastating experience for many countries and their industries. Protectionist measures to protect domestic markets, like the imposition of tariffs, meant that products from other countries increased in price, decreasing the margins on manufactured

goods, whilst the lack of demand led to lower prices for the finished goods. The immediate effects of the Great Depression were that in different countries, people saw very stark declines in their incomes. This meant that they were no longer purchasing certain goods and services, which meant that other people, who produced these goods and services, could no longer get by. This problem was self-perpetuating: People had less money, so they bought fewer goods, meaning the people producing those goods had less money, so they too bought fewer goods.

In itself, this problem was bad enough, but the monetary system of the time dictated that the way to get people to spend what they had, was with deflationary mechanisms. In this way, it was argued, prices would be driven down, meaning people could buy more with the money they had, stimulating growth of the economy through increased spending. These measures were driven by the prevailing political economic thinking of the time: the Gold Standard. The Gold Standard was a relatively simple monetary doctrine, establishing that any currency in the world is valued in a certain amount of gold. This meant governments were very limited in the ways they could respond to financial crises. Additionally, because many currencies had a fixed value vis-à-vis gold, their only way to stop foreign goods from flowing into their countries was though the institution of trade barriers and tariffs. (When currency floats, by contrast, states can choose to inflate their own currency, making importing goods less attractive) In this way, states hoped to increase the consumption of local goods and the strengthening of their own economies.[29] These measures to reduce imports, and thus skew the trade-balance of a country more towards exports seem logical from the perspective of a single state undertaking the measures. Yet, as large numbers of states enacted these same measures, international trade ground to a halt.

So, to combat the effects of the Depression, states instituted deflationary measures, with the intention of increasing the spending power of their citizens. This did not, however, have the desired effect. Instead of spending money, like the various governments that instituted these measures intended, people started to postpone large investments of money, anticipating a continued deflationary approach by their financial institutes. The institution of deflationary policies therefore had the opposite of the intended effect, leading to a decrease in consumer

[29] Eichengreen and Irwin, 'Slide to Protectionism'.

consumption.[30] This halted consumption meant that companies could not sell their goods, leading to a decrease in profits and a subsequent laying-off of employees. These laid-off employees could no longer afford the goods companies were selling, leading to further decreased income for these companies and further laying-off of people. Governments at the time realised that these downward cycles required intervention, as the economy was not recovering from the Depression on its own. This meant taking measures other than deflation.

Eventually, many states resorted to tariffs, trade controls and the limiting of exchanges. In addition, states started to abandon the Gold Standard, starting with Great Britain in 1931. This meant that they would be able to devalue their currency, making trading in sterling more interesting for economic actors from other states, whilst at the same time, making their exports cheaper, and imports more expensive. This meant an increase of domestic consumption of domestic goods, with increased exports meaning that many industries saw the strain of the Great Depression start to alleviate. This measure was only taken later however, after the impact of the Great Depression had been felt for a few years. Most countries did eventually abandon the Gold Standard, but the moment this was done differs for different countries. Great Britain and Norway were amongst the first countries to let go of the Gold Standard, whereas the Netherlands, Belgium and France were the last countries in Western Europe to do so. This meant recovery from the Depression was slower in the Netherlands than in other countries.[31]

Looking from the global responses to the Depression to specifically the Dutch case, the Dutch government sought to combat the crisis by supporting Dutch businesses and restricting cheaper imports as much as possible.[32] However, the Dutch economy had been oriented on exports for a long time and the collapse of demand for Dutch agricultural goods from Great Britain for example, led to a significant decrease in prices for groceries, which adversely affected the agricultural sector by turning profits into losses.[33] As the Dutch government started to

[30] Peter Alexis Gourevitch, 'Breaking with orthodoxy: the politics of economic policy responses to the Depression of the 1930s', *International Organization* 38, no. 1 (1984): 95-129.
[31] J.L. van Zanden, R.T. Griffiths, *Economische Geschiedenis van Nederland in de 20e eeuw. Van een veelzijdige volkshuishouding met een omvangrijk koloniaal bezit naar een 'klein land' binnen Europa* (Utrecht, 1989).
[32] F.A.G. Keesing, *De conjuncturele ontwikkeling van Nederland en de evolutie van de economische overheidspolitiek 1918-1939* (Nijmegen 1978).
[33] Keesing, *Economische Overheidspolitiek.*

intervene, deflating the gulden to maintain profitability for Dutch farmers, the dairy sector was hit by higher prices for goods they required to feed their livestock. Similarly, other measures taken to benefit one sector often had knock-on effects on other sectors, requiring a continuing range of measures taken by the government.

After prices had started to decrease, demand started to slump as well, meaning the export-oriented Dutch industry could no longer sell what they produced, and the fall of the pound in this time made their position even less tenable. Imports from the sterling area became significantly cheaper compared to Dutch domestic production, leading the government to take unprecedented action, limiting imports of certain goods to small amounts. As other states took similar measures against Dutch exports, the government had to act to make sure those exports that were allowed were spread reasonably between different producers.[34]

The effects the Crisis Years had on the Dutch economy are clear to see when examining Dutch GDP before and during the Depression. After a short period of decreasing productivity, the Dutch GDP rose from the equivalent of 2,4 million euros in 1923, to a peak of almost 3 million euros in 1929. During the Crisis Years, Dutch production value nosedived, with GDP reaching a low point of just over 2,2 million euros in 1935, and only then starting to recover.[35] In total, from 1929-1935, the Dutch GDP fell by over a quarter.

The decrease in profitability that was experienced in different sectors affected wages as well. Whilst the decrease in prices in a lot of areas did temporarily increase the spending power of factory workers during the beginning of the depression (as their pays stayed the same whilst prices dropped) decreases in wages in the following years effectively eliminated these gains in the following years. The Dutch government, in attempting to minimize government debt, cut spending tremendously and tried to keep lowering prices and wages to keep the Dutch economy internationally competitive. These attempts were mostly futile, as the high value of the gulden severely decreased the manoeuvring room the government had. Combining the lack of effectiveness of the measures the government did take with their reluctance to abandon the Gold Standard, the Dutch economic recovery was very slow.

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[34] Ibidem.

[35] Centraal Bureau voor Statistiek, *Natinoale rekeningen; historie 1900-2012*. (26-06-2014). https://opendata.cbs.nl/statline/#/CBS/nl/dataset/7343nr/table?dl=5043 (accessed 26-06-2023).

The Dutch government did not use the same methods other states did for quite some time. The Gold Standard was maintained and only measures in line with the Gold Standard, like lowering wages and prices, were taken to counteract the relative rise in value the Dutch currency was experiencing. These measures, however, were insufficient to solve the larger problems the Dutch economy faced. Despite the measures undertaken by the Colijn government, relative wages and prices both rose sharply as other states started to devalue their currencies. Between 1930 and 1935, the year before the Dutch government let go of the Gold Standard, the Gulden increased in value relative to other currencies by about 80 percentage points, whilst both relative wages and prices rose by about 40 percentage points.[36] In the same period, unemployment rose from about 4%, to 12%, and although by this time 12% unemployment was still lower than the United States' 14%, the US had been on a downward trend in unemployment for about four years, whilst unemployment in the Netherlands did not substantially decrease in the pre-war years.[37]

This was the situation in the Netherlands at this time. The Dutch economy, oriented on international trade, started to take hits when international trade started to dry up, as different states instituted trade barriers and other protective measures. The Dutch government did not abandon the Gold Standard, meaning that it had no capabilities to make Dutch produce more attractive to international customers. After all, due to the Dutch currency not being devalued, it was relatively expensive to buy guldens, making it expensive to buy Dutch. In tandem with this, Dutch labour was more expensive than foreign labour, as the Dutch currency was more expensive compared to other currencies. The Dutch government's reluctance to abandon the Gold Standard was due to the perceived security the Gold Standard would offer the Dutch economy and its access to global trading networks. The easy convertibility between different currencies on the Gold Standard would facilitate the flow of international trade according to this line of thinking. This would only hold, however, as long as there were other states maintaining the Gold Standard one would trade with. Additionally, abandoning the Gold Standard was an unknown measure to take. The Colijn government was hesitant to take a leap of faith like that, not knowing what its

[36] J.L. van Zanden, 'Nederland in het Interbellum', *Economisch-Statistische Berichten* no. 73 (1988): 176.
[37] Van Zanden, 'Nederland in het Interbellum': 177.

consequences would be. This vacillating on the part of the government, not taking the measure that was on many people's minds, was splitting many parties and the Dutch government fell in 1935 over the question of devaluating. The new government, consisting of the same parties as the old government, did not however commit to abandoning the Gold Standard just yet. This was an important factor in the slow Dutch economic recovery compared to other countries.[38]

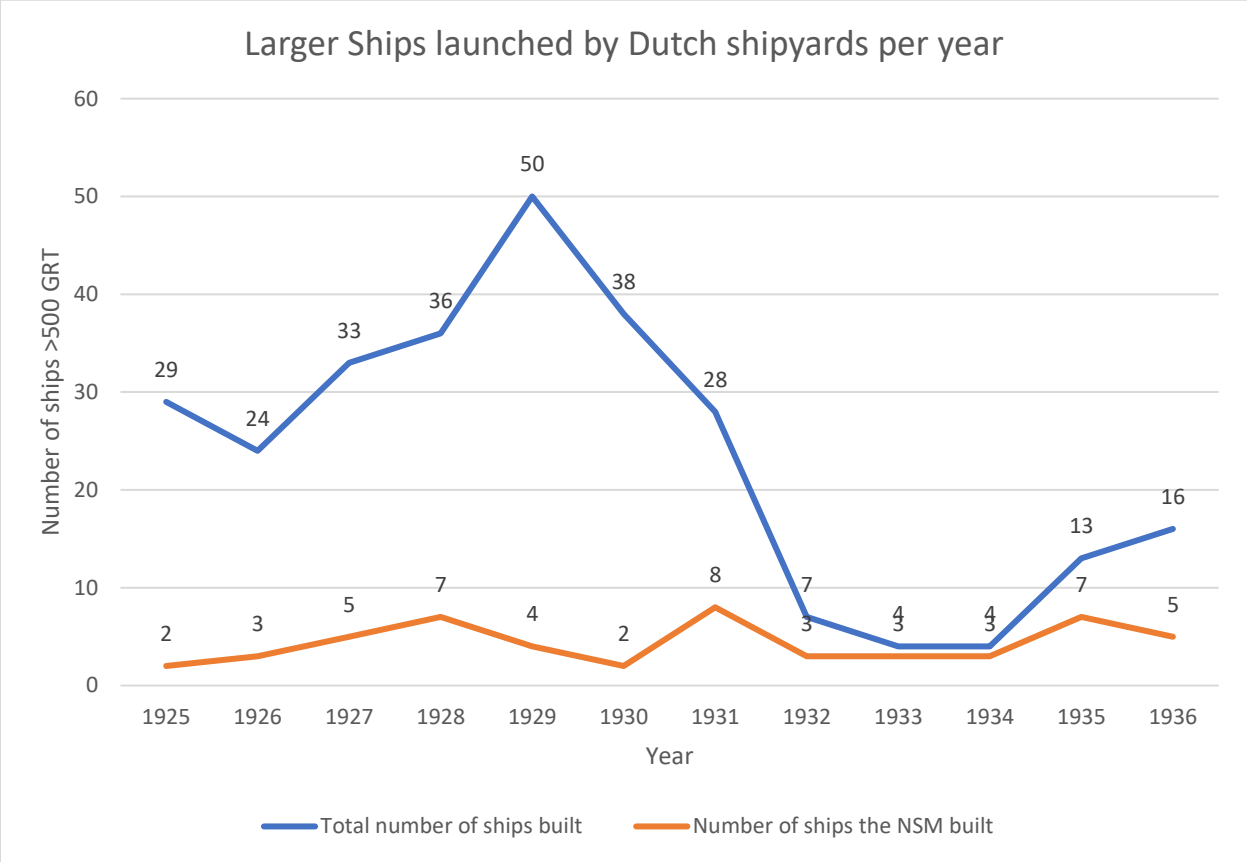
This was devastating for industries dependent on exports, the shipbuilding industry one of them. Shipbuilding was heavily reliant on foreign currencies when serving foreign customers, specifically the pound, as contracts with foreign customers would be paid for in the local currencies.[39] This was because the shipping industry was largely reliant on the pound for contracts. Most Dutch shipyards participated in both shipbuilding and ship-repair, which is useful in this case, as ship-repair was necessary to keep ships afloat, especially as shipping companies kept their ships sailing longer as a means to postpone large investments in new ships, whereas shipbuilding wasn't very profitable during this time, as was stated by the board of the NSM in this time:

> For a shipyard like ours, which exclusively builds ships and doesn't perform repairwork, the negotiable price is decided by the price on the world markets. The countries that are dedicated to shipbuilding, all have currencies that have been devalued by more than 40%. We can't fully adjust to this, unless all of our costs were cut by the same margin. This is far from the case. Many of our costs remain unchanged and deliveries, which we have to order from protected companies, are insufficiently cheaper. If the process of adjusting does not soon succeed, the Netherlands will have to reduce its shipbuilding industry to a minimum.[40]

The effects of the Great Depression on Dutch shipbuilding were multiple, most of them very severe. The different shipyards managed to build an average of 34 larger (over 500 Gross

[38] Ben Bernanke and Harold James, 'The Gold Standard, Deflation, and Financial Crisis in the Great Depression: An International Comparison' in *Financial Markets and Financial Crises*, ed. R. Glenn Hubard (Chicago: University of Chicago Press, 1991).
[39] H. Goedkoop and D. Goedkoop, *Verslag aan H.H. Aandeelhouders over het Een-en-veertigste Boekjaar der Vennootschap*. Financial Report. Amsterdam: Nederlandsche Scheepsbouw Maatschappij, 1935. From Stadsarchief Amsterdam, *Archief van de Nederlandsche Dok- en Scheepsbouw Maatschappij 1875-1999.* (accessed April 21, 2020).
[40] Goedkoop and Goedkoop, *Verslag over het Een-en-veertigste Boekjaar*.

Register Tons) ships a year in the period 1925-1931, (amounting to a total of 238 ships) as shown in the graph below, which is based on the Lloyd's register of shipping in these years.[41] This dropped to lows of just 4 ships built over 500 Gross Register Tons in 1933 and 1934. It is interesting to see that the numbers of ships built in 1929, 1930 and 1931 are still relatively similar to the pre-crisis numbers, although a steady decline can be seen. The delay in the drop to single digits of ships built yearly can be explained by the time it takes to build a ship. Although the crisis started in 1929, shipyards were still receiving orders up to that point.[42] Therefore, in the first few years of the crisis, shipyards were still largely occupied and busy fulfilling orders. It is only after



2.1 *Ships larger than 500 GRT built per year by Dutch Shipyards*

Source: Own calculations based on: The Excess Insurance Company, Lloyd's Register of Shipping 1936 Steamers (London 1936).

[41] Excess Insurance, *Lloyd's.*

[42] H. Goedkoop and D. Goedkoop, *Verslag aan H.H. Aandeelhouders over het Zes en Dertigste Boekjaar der Vennootschap*. Financial Report. Amsterdam: Nederlandsche Scheepsbouw Maatschappij, 1930. From Stadsarchief Amsterdam, *Archief van de Nederlandsche Dok- en Scheepsbouw Maatschappij 1875-1999*; Rotterdamsche Droogdok Maatschappij, 'Jaarverslagen van de RDM', *RDM-Archief*. 2017. https://www.rdm-archief.nl/jaarverslagen-van-de-rdm/ (accessed 14-12-2020).

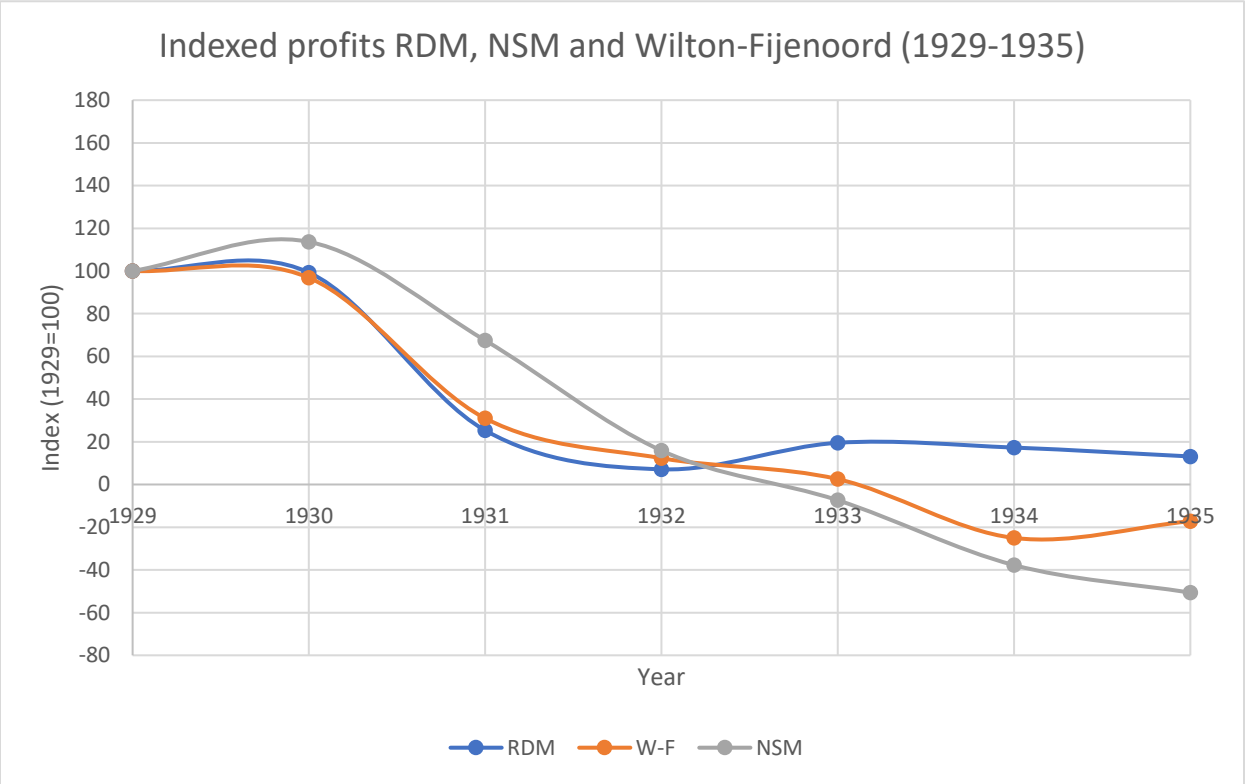
the onset of the Great Depression that the orders stopped coming in, leading to idle wharves and a decrease in output from the shipyards.

The 44 ships built from 1932 through 1936 are built by a few different shipyards, as set out in the tables below.[43] What immediately stands out, is that the production by the NSM had not been cut down to as low numbers as the different other companies that competed with it previously. In some years during the Depression, as much as 75% of the large ship production in the Netherlands could be attributed to the NSM. This, despite their yearly reports indicating that the company was suffering badly from the Depression. This indicates that the quantity of ships built was not the most important measure of success for a shipyard in this period. For instance, in the report for 1931, the company leadership wrote that the yards at least would be occupied until late into 1933 but the report also mentions that the contracts the company takes, specifically those taken with shipping companies outside of the Netherlands, are not satisfactory in terms of revenue.[44] This is due to the letting go of the Gold Standard by countries like the United Kingdom, which made contracts made for a set price in pounds sterling less valuable, as the British government devalued the pound after they let go of the Gold Standard, whilst the Dutch government did not do so until a few years later. Because of this, it became less profitable for Dutch shipbuilding companies to build ships for foreign shipping companies, as Dutch production was relatively expensive, and foreign shipping companies were looking to save costs when ordering ships. The international currency of the age, the pound, was less stable, meaning that the value of an order may be significantly lower at the tail-end of the building of a new ship than it was when it was first ordered.[45]

Not only did international orders received before the devaluing of foreign currencies significantly drop in value, the orders that could be attained afterwards were not always lucrative either. The importance of establishing and strengthening relations with foreign shipping

[43] Excess Insurance, *Lloyd's.*
[44] H. Goedkoop and D. Goedkoop, *Verslag aan H.H. Aandeelhouders over het Negen en Dertigste Boekjaar der Vennootschap*. Financial Report. Amsterdam: Nederlandsche Scheepsbouw Maatschappij, 1933. From Stadsarchief Amsterdam, *Archief van de Nederlandsche Dok- en Scheepsbouw Maatschappij 1875-1999.* (accessed 21-04-2020).
[45] H. Goedkoop and D. Goedkoop, *Verslag aan H.H. Aandeelhouders over het Acht en Dertigste Boekjaar der Vennootschap*. Financial Report. Amsterdam: Nederlandsche Scheepsbouw Maatschappij, 1932. From Stadsarchief Amsterdam, *Archief van de Nederlandsche Dok- en Scheepsbouw Maatschappij 1875-1999.* (accessed 21-04-2020).

companies is given by the board as reason enough to take on these orders, whilst other explanations may be sought in the fact that the NSM did not want its yards to go idle for any extended period of time, as an unprofitable order is still better than no orders at all.[46] After all, a certain number of employees will still need to be paid when the yards are idle. Keeping these employees working on new ships, meant their labour was at least partially paid for using the revenue the newly built ships generated. It can be seen in the reports covering the years 1932 and 1933 that the profits the NSM made at this time were drastically going down during this period as well, with a gross profit of over 300.000 guldens in 1931, only 80.000 in 1932 and a loss of 70.000 guldens in 1933. The company copes with these losses by dipping into their reserves, as well as tapping into a fund designated for expansion of the shipyard. The following year, in 1934, the NSM continues burning through its expansion fund, almost depleting it with a 195.000



2.2 *Indexed profits of RDM, Wilton-Fijenoord, and NSM. Profits from 1929 taken as year against which has been indexed*

Source: Own calculations based on: Stadsarchief Amsterdam, Archief van de Nederlandsche Dok- en Scheepsbouw Maatschappij, Yearly reports 1929-1935. (accessed 21-04-2020); Rotterdamsche Droogdok Maatschappij, 'Jaarverslagen van de RDM', RDM-Archief. 2017. https://www.rdm-archief.nl/jaarverslagen-van-de-rdm/ (accessed 14-12-2020); Gemeentearchief Schiedam, Archief van Wilton-Fijenoord 1875-1985, Yearly reports 1929-1935. (accessed 21-04-2020). See Appendix 1.

[46] Goedkoop and Goedkoop, *Verslag over het Een-en-veertigste Boekjaar.*

gulden loss. The following year sees the company going into debt to cover their expenses. The company is not shown to be solvent again until 1937, when they manage to start paying of their recently-incurred debt.

As can be seen in the year-reports different shipbuilding companies, the income shipyards had was severely reduced during the years following the Great Depression's onset in 1929. The profits of the NSM declined from 520.000 guldens on the 31st of December 1929, to a loss of 260.000 guldens on the 31st of December 1935, only recovering profitability in 1937.[47] Other shipyards fared little better. Wilton and Fijenoord had just merged into Wilton-Fijenoord in 1929, and the company reported shared profits to the amount of 1,8 million guldens in that year, whilst reporting a loss (or rather a use of the company's reserves) of 315.000 guldens in 1935. The RDM reports a profit of 2,3 million guldens in 1929, whilst only reporting profits amounting to 300.000 guldens in 1935. The different profits made by the shipbuilders have been indexed and can be found in the graph above. For each shipyard, the profits in 1929 are taken as a benchmark to compare the results in the following years to. All three shipyards show a similar intial trajectory at the start of the Crisis Years. Although 1930 was still a good year for all three, in 1931, profits started a sharp decline. What can be seen from this graph as well, is the impact the repair-branches of the major shipbuilding company's had on their profitability. Whilst the NSM did not regain profitability before 1936, the RDM manages to remain profitable throughout the Crisis, which they attributed to the repair-work remaining a somewhat steady source of revenue.[48] Wilton-Fijenoord did not escape having to draw upon their reserves, but their repair-branch helped them to keep losses overseeable and their revenue showed an upturn as early as 1935. The NSM is the company that reported the highest losses during the crisis years in their yearly reports. [49] However, whilst the NSM reported the highest losses, and the NSM Yearly Reports mentioned the Crisis Years most frequently of all three shipbuilders, both the RDM and Wilton-Fijenoord mentioned having to make significant deductions on number of workers and worker

[47] Stadsarchief Amsterdam, *Archief van de Nederlandsche Dok- en Scheepsbouw Maatschappij*, Yearly reports 1929-1935. (accessed 21-04-2020).
[48] Rotterdamsche Droogdok Maatschappij, 'Jaarverslagen'.
[49] Gemeentearchief Schiedam, *Archief van Wilton-Fijenoord 1875-1985*, Yearly reports 1929-1935. (accessed 21-04-2020).

pay, as well as indicating the shipbuilding market had dried up and ship-repair having been their fall-back option in lieu of building new ships.

This illustrates the major problem shipbuilders in this period were encountering: Dutch customers were not interested in buying new ships, since their margins slimmed and the world economy was in recession, and the measures taken to combat the recession meant there was very little international trade. There was potential for international customers, as shown by the fact that the NSM built ships for foreign customers, but the state of the currency and the refusal of the Dutch government to devaluate the gulden meant that those contracts which could be taken, would not net the shipbuilder a profit. Those shipyards that could, would fall back on their repair branches, whilst a shipyard like the NSM, whose sole occupancy was building new ships, did not have that luxury.[50] The NSM building ships for customers from Norway and the Soviet Union, therefore, must not only merely be seen as a company outperforming competitors internationally. Whilst that was a part of what happened, the NSM attracting international contracts in a time of crisis was also a necessity for the shipbuilding company, as it did not have the capability of using its wharves for other purposes than building new ships.

2.3 *Ships built per shipyard, 1932-1936*

Source: Own calculations based on: The Excess Insurance Company, *Lloyd's Register of Shipping 1936 Steamers* (London 1936).

Shipyard	**Number of ships >500 GRT built**
NSM	21
De Merwede	1
Wilton-Fijenoord	5
De Noord	3
De Schelde	2
P. Smit	4
RDM	5
Van der Werf	1
Van der Giessen	1
A. Vuijk	1

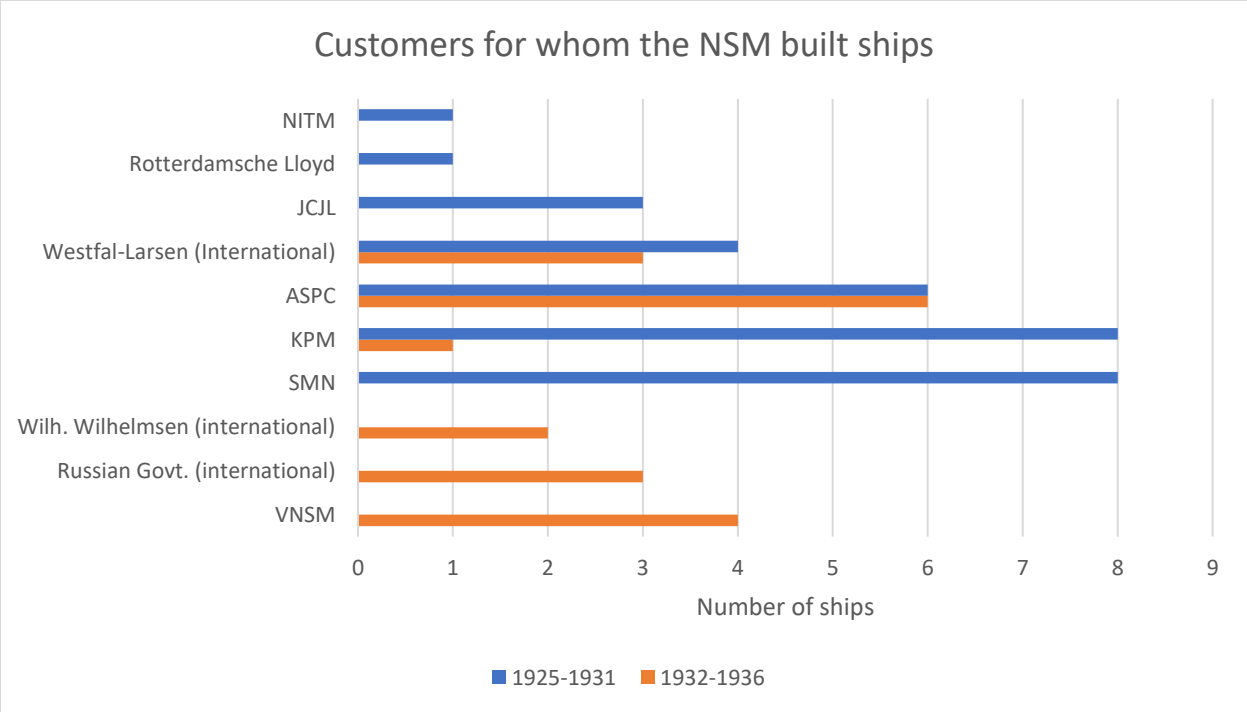
[50] Goedkoop and Goedkoop, *Verslag over het Een-en-veertigste Boekjaar*.

Other shipbuilders did not build many larger ships during the Crisis Years, whilst the NSM not only built a significant number of larger ships during this time, but also built those ships for customers they had not previously serviced. Those customers they had not previously built ships for were often not Dutch customers.[51] This begs the question: How did the NSM manage to reach new customers during a period when one would think customers would stick to the sellers they knew and trusted previously. The NSM may not have had the highest income of any shipbuilder in the Netherlands during this time, but the ships they did build were built for new customers during a time the market for ships was contracting as opposed to expanding.

[51] Excess Insurance, *Lloyd's*.

3. What customers ordered from shipbuilding companies in the Netherlands before and during the Great Depression?

The NSM built 21 ships in the period from 1932 through 1936. Of these 21 ships, eight were built for foreign customers. It is interesting to see such a large portion of the ships built being for foreign companies. In the period before the Great Depression, from 1925 through 1931, the NSM built four ships for one client that wasn't Dutch. These were four ships built for the Norwegian company Westfal-Larsen&Co, one of the largest shipping companies based in Bergen. These four ships were all tankers, part of a budding Norwegian Tanker shipping fleet, one of the few shipping sectors that managed to grow during the Great Depression.[52] The NSM built twice as many ships for foreign customers during the Crisis Years than they did in the period immediately preceding it. Westfal-Larsen was also the company that ordered three of the eight ships not built for Dutch customers, all three of these being tankers as well. Of the other five ships, two were ordered by Wilhelm Wilhelmsen, another Norwegian shipping company, this one located in Oslo. These two ships were built for both cargo and passenger transport. The



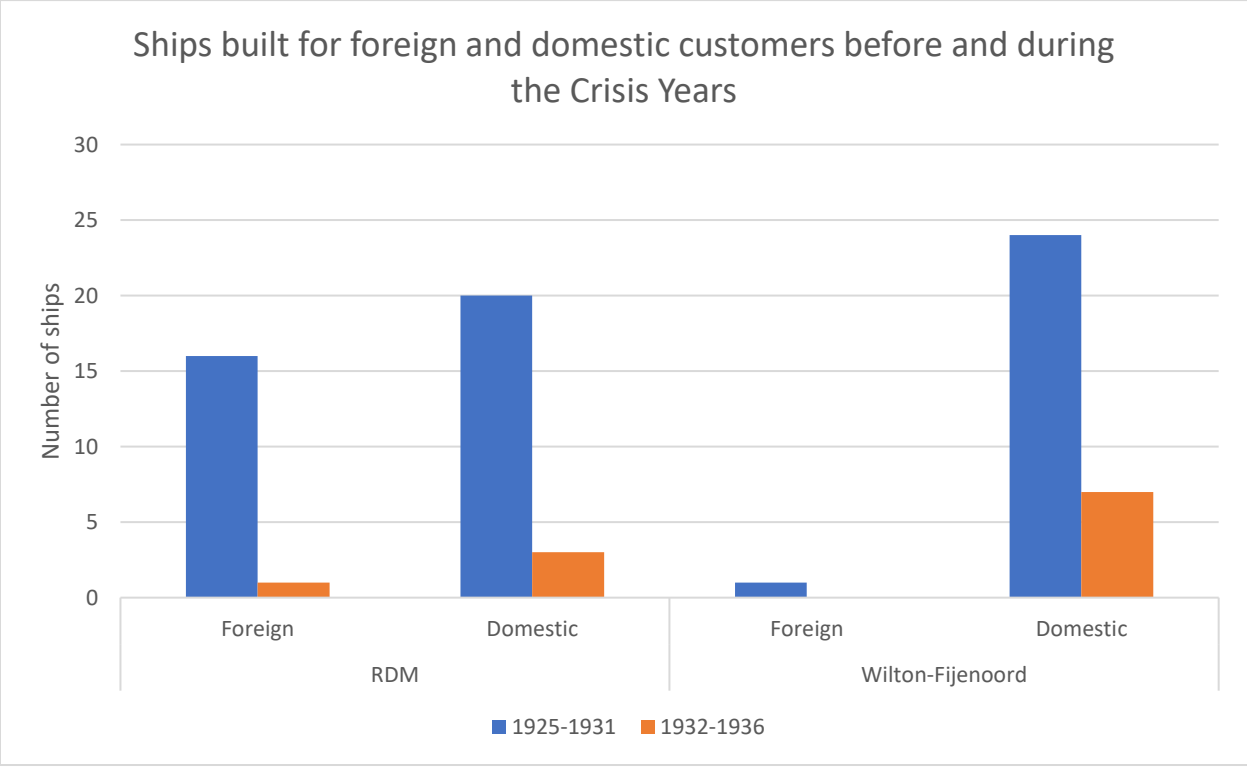
3.1 *Ships built per customer before (1925-1931) and during (1932-1936) the Crisis Years, by the NSM*

Source: Own calculations based on: The Excess Insurance Company, *Lloyd's Register of Shipping 1936 Steamers* (London 1936).

[52] Tenold, 'Crisis? What Crisis?'.

remaining three ships were built for a very different sort of customer: the Soviet government. These were the A. Andreev, Kosarew and Valeriy Meshlauk. All three of these were cargo ships.[53] The NSM did clearly manage to get international orders, but not all of these were from companies that had had prior business dealings with the NSM.

Compare the numbers during the Depression (21 ships built, eight for foreign customers) to the situation before the Great Depression: 31 ships were built, with four of these being built for Westfal-Larsen.[54] Most of the ships built during these periods were still built for domestic customers, but the percentage of ships built for companies from other countries was significantly higher during the Great Depression than before. 13% of the ships before the Great Depression were built for foreign companies, compared to 38% during the Great Depression. Looking at tonnages, this is equally as pronounced: with foreign ships being slightly larger than average before the Great Depression (13% of ships accounting for 15% of the total tonnage of ships built),



3.2 *Number of ships built by the RDM and Wilton-Fijenoord before and during the Crisis Years for both foreign and domestic customers*

Source: Own calculations based on: The Excess Insurance Company, *Lloyd's Register of Shipping 1936 Steamers* (London 1936).

[53] Bruning, *40 Jaar NSM*.
[54] Excess Insurance, *Lloyd's*.

and slightly smaller than average during the Depression. (38% of ships accounting for 37% of the total tonnage)

Compare the case of the NSM to that of the RDM and Wilton-Fijenoord, two of the domestic competitors in the shipbuilding business capable of building a similar number of ships. The RDM built a lot of different ships for different customers before the Great Depression. Of these ships, sixteen were built for customers outside the Netherlands, as the graph shows, far more than the NSM's four. However, the RDM only built one ship for foreign customers during the Great Depression. In stark contrast to these numbers, Wilton-Fijenoord built 24 ships for domestic customers before the Crisis Years, and only a single one for a foreign customer. This focus on the domestic market continues during the Depression, with Wilton-Fijenoord only building 7 ships, all for domestic customers. At the same time, the NSM expanded its international clientele. during the crisis, rather than losing their customers from other countries. Because the NSM expanded its customer base internationally, it managed to keep its wharves operational during a time when there was a dearth in of domestic clients for shipyards. As a matter of fact, the RDM and Wilton-Fijenoord did not build ships in a few of the years of the Great Depression. This in stark opposition to the NSM, which decreased the total use of the shipyard, but never idled its shipbuilding wharves entirely. This will be adressed more later in this research, but it is indicative of what the differences are between the shipyards. The NSM was entirely focussed on the building of new ships, whilst shipyards like Wilton-Fijenoord and the RDM could, in a pinch, rely on their repair-yards to maintain solvency in a crisis.

The orders for the NSM are interesting in a different light as well. Looking at the RDM's international orders, one can see that there are a lot of different customers, usually ordering just a single ship.[55] The NSM, in comparison, only has one more customer before the Depression, compared to during the Depression, seven compared to six. The international customer the NSM had before the Great Depression, Westfal-Larsen, ordered four ships before the Great Depression, and three during the Depression, with the other two customers of the NSM that weren't from the Netherlands also both contributing multiple ships (three from the Soviet Russian government and two from Wilhelm Wilhelmsen). This difference is an important

[55] Ibidem.

one in looking at the effectiveness of the NSM. Whilst a company like the RDM managed to serve a large number of foreign customers for lower numbers of ships, when business became scarce, they lost all of the international customers they had. The NSM, by contrast, served a smaller number of customers with multiple ships each, managing to maintain quite a few of these customers even during the Depression.[56]

Before the Great Depression, the customers of the NSM were predominantly Dutch, as can be seen in the graph detailing the customers the NSM had.[57] Some of these ships were built for companies in the Netherlands, like the Anglo-Saxon Petroleum Company (ASPC), nowadays known as Shell. Other Dutch companies that had contracts with the NSM were the Koninklijke Paketvaart Maatschappij (KPM) and the Java-China-Japan Line (JCJL), other Dutch companies, both of which transported packages, mail and people in the far east. The KPM specialised in transport around the Dutch East Indies and the JCJL, as its name implies, transported these between Japan and China. The Scheepvaart Maatschappij Nederland (SMN), for which the NSM built multiple ships as well, performed the same tasks between Western-Europe and East-Asia and Indonesia.

The most prominent foreign customer of the NSM in this time was the Norwergian shipping company Westfal-Larsen, ordering ships both before and during the Great Depression.[58] Like the NSM, which was founded in 1894, Westfal-Larsen was a relatively new company. It was founded in 1905 and primarily operated between North and South America and Western Europe, mainly operating tankers and running a liner service between Europe and the American east coast. Westfal-Larsen also ran a lot of tramp shipping in this time. Tramp shipping is the shipping of goods without a regular schedule or designated routes, rather opting to chase orders more ad hoc and going with what's availible at any given time.

The different companies ordering ships from the Dutch shipyards in this period can be consolidated into a few groups: there were those companies that ordered ships for shipping to, from, and between the different colonies of the Netherlands, those that shipped oil in tankers, mostly from the Dutch colonies, but internationally as well, and international shipping lines,

[56] Ibidem.
[57] Ibidem.
[58] Ibidem.

which moved either people, goods, or both. A few observations can be made about the different clients the shipyards had during these times, and about the shipyards themselves as well.

Of the pre-crisis clients the different shipyards had, most were Dutch. This makes sense, as the shipping companies in the Netherlands would be more familiar with Dutch shipbuilding companies, and ships were often built for transport between the Netherlands and its overseas possessions, or between the different colonies themselves. It is also interesting to see that different shipyards had different kinds of foreign customers. The RDM built 36 ships between 1925 and 1931, accounting for a significant share of domestic Dutch shipbuilding in the period, and building fairly evenly split between domestic and foreign clientele. Significantly, the RDM had more foreign than Dutch customers, despite building more ships in total for domestic clients. Many of the companies buying RDM ships from other countries, mostly the UK, only ordered one at a time.[59] The RDM built twenty ships for domestic clients, about half of which were tankers, and most of those were built for shipping oil in the West- or East Indies. Ships built for foreign customers more often than not were either personel- or cargo transport ships, like in the case of the Manchester Spain line ordering a ship from the RDM. Due to the lower number of ships per customer built by the RDM, they built for more customers than other shipyards did, only averaging 1,9 ships per customer.

Comparing this to the NSM, it is easy to see that there were some differences in the kinds of orders attained. The NSM built 31 ships from 1925-1931,[60] but where the RDM built for nineteen different customers, the NSM had only seven different customers, averaging 4,4 ships per customer. The customers the NSM had during this period were by and large domestic customers: Westfal-Larsen, from Norway, was the only foreign client that bought new ships there. This is probably best explained by the large expansion of the Norwegian merchant navy at this time. Westfal-Larsen ordered a total of four ships from the NSM just before the Crisis years.[61] These four ships being the only ships built for foreign customers during this period

[59] Ibidem.
[60] Ibidem.
[61] Tenold, 'Crisis? What Crisis?'.

brings the percentage of ships built for non-Dutch clients to thirteen, compared to the forty-four percent the RDM attained.

During the crisis, quite a few companies fell back on their repair-branches. The RDM is a prime example of these companies, only building four new ships for different customers between 1931 and 1936, whilst still, though barely, maintaining profitability. All four of these ships were built for different customers, making the RDM build one ship per customer. This fallback did negatively impact their finances, as can be seen in the graph detailing the profits of a few of the Dutch shipbuilders. It did not, however, cause them to run deficits.

It is interesting to see that there were multiple foreign clients for the NSM who ordered during the Great Depression, despite not having had previous business contacts with the shipyard.[62] Of the three international customers, Westfal-Larsen had been a customer in years before already, and Wilhelm Wilhelmsen was a similar Norwegian shipping company, this one shipping freight rather than oil, and thus needing cargo ships rather than oil tankers. However, the fact that some of these ships were built were built or the Russian Government stands out. The Dutch Government had no diplomatic relations with the Soviet Union, but this Dutch company did manage to attract an order from the Soviet Union. It is interesting that a Dutch company has to resort to attempting to extract orders for its shipyard from a state with which its government had no relations.

It is interesting to note that both the NSM and Westfal-Larsen were at this time relatively new in their respective fields. This might indicate a collective rising as relatively new and innovative companies. The Dutch company kept building ships during a period when this was not only difficult, but also actively unprofitable. Norwegian shipping as a whole was expanding during this period: In terms of absolute tonnage the Norwegian merchant fleet was the fastest grower between 1923 and 1939, outstripping the rapidly growing Japanese, German and Greek merchant marines, and definitely outperforming the shrinking American and British shipping industries.[63] Westfal-Larsen was a significant contributor to this expansion of the

[62] Excess Insurance, *Lloyd's*.
[63] Tenold, 'Crisis? What crisis?'.

Norwegian merchant marine, becoming the largest shipping company in its native Bergen by 1938.

In a similar vein, the Norwegian shipping company Wilhelm Wilhelmsen was a company expanding during the interwar years, continuing to do so during the crisis as the Norwegian shipping sector still expanded during this time. The Norwegian merchant fleet was rapidly modernising during this time and the different shipping companies involved in this boom ran into the limits of Norwegian shipbuilding capabilities,[64] thereby requiring for them foreign construction of new ships. This is where the NSM becomes a part of this shipping boom. Wilhelm Wilhelmsen in this time ordered liners pretty much exclusively, as it had been doing for some time.[65] The ships built for Wilhelm Wilhelmsen, the 'Tarn' and the 'Tricolor', were larger than many of the previous ships the shipping company had previously ordered at 10.000 GRT. Wilhelm Wilhelmsen refers to these ships as 'wool racers', meant to ship, among other things, wool from Australia to France.[66] These ships were essentially prototypes for the ships the company ordered during the next two decades, with the final ship in a similar design being delivered to the company in 1954.[67]

[64] Ibidem.
[65] Bard Kolltveit and Michael Crowdy, *Wilh. Wilhelmsen, 1861-1994 a Brief History and a Fleet List* (World Ship Society, Kendal, 1994): 22.
[66] Kolltveit and Crowdy, *Wilh. Wilhelmsen*: 17-22.
[67] Kolltveit and Crowdy, *Wilh. Wilhelmsen*: 22.

4. What types of ships did Dutch shipbuilders build for their customers before and during the Great Depression?

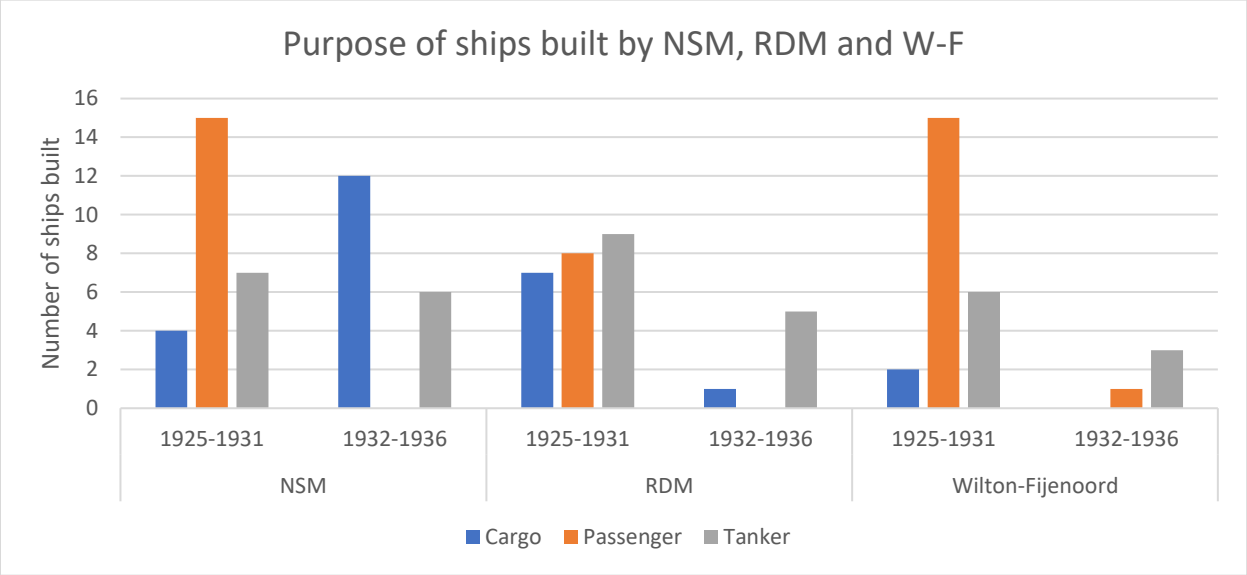
Shipbuilding companies have different ways to market themselves to their consumers. Important amongst these is the type of ships they build. Specific customers will look for ships that serve the purposes they are most interested in. A ship meant for passenger travel will not be of interest to a shipping company whose primary business is the shipping of mail, for example. With regards to competitiveness, this means that shipyards need to be perceived to be able to adequately build ships that are attractive for shipping companies to buy. In this chapter, the types of ships the NSM and other Dutch shipyards built before and during the Crisis years will be examined to find whether the types of ships they built, experience they had with building those different ship types, and contemporary innovations they utilised in shipbuilding were of influence for the position the shipyards held in the (international) shipbuilding market.

During the period preceding the Great Depression, the NSM built a variety of different ships. Cargo- and passenger transport ships were built for the different Dutch shipping companies that ordered ships before the Great Depression, as well as a few tankers for both the Anglo-Saxon Petroleum Company and Westfal-Larsen in this period. It was common for the Dutch shipyards in this time to build cargo ships for different routes, as many of the Dutch shipyards at that time built ships for Dutch companies that ran various routes within the Dutch colonial empire.[68] Examples of companies that serviced such routes are the previously-mentioned Koninklijke Paketvaart Maatschappij and the Japan-China-Japan Line. Other Dutch companies for which shipyards built ships were shipping companies that shipped oil, requiring tankers. The Anglo-Saxon Petroleum Company is a good example of such a company, but their subsidiary, the Curaçaosche Scheepvaart Maatschappij, also ordered ships, from the RDM for example.[69]

The ships built before the Great Depression by both the NSM and its Dutch competitors varied in both size and purpose. The NSM, the RDM, and Wilton-Fijenoord all built differing quantities of vessels with similar purposes.[70] Most yards built cargo ships, passenger ships and tankers. The quantities in which they built these ships varied, but the customers for whom these

[68] Excess Insurance, *Lloyd's.*
[69] Ibidem.
[70] Ibidem.

ships were built were not too varied. Domestic customers for the different shipyards were mostly a group of Dutch companies that ordered from multiple different shipyards concurrently. For example, the Anglo-Saxon Petroleum Company ordered tankers from the NSM, the RDM, and Wilton-Fijenoord, and the Koninklijke Paketvaart Maatschappij ordered cargo ships from all three of these. The differences between the different shipyards are mostly visible in the type of ships they built for foreign customers. This is not a product of the different kinds of specialities the Dutch shipyards had, but more of the demand of the different customers. Before the Depression, Dutch shipbuilding for foreign customers was not extremely expansive. Customers ordered small numbers of ships, meaning they did not return to Dutch shipyards after ordering the first ship. In some cases, like the Manchester-Spain line, this was because the shipping company in question was discontinued. In other cases, this was because the Dutch shipyards were not the main shipyards at which successful foreign companies sought to order ships. The NSM in this example is an outlier, as they did ongoing connections with Norwegian shipbuilders. Having started building ships for Norwegian customers in 1921 for FA Winge&Co. in Oslo.[71] The NSM thus had a slight head start with regards to Norwegian customers, as they could profit from name-recognition amongst Norwegian shipping companies.



4.1 *Purpose of ships built by the NSM, the RDM, and Wilton-Fijenoord both before and during the Crisis Years*

Source: Own calculations based on: The Excess Insurance Company, *Lloyd's Register of Shipping 1936 Steamers* (London 1936).

[71] Ibidem.

The types of ships built by the different Dutch shipyards show one reason the NSM could maintain competitiveness during the Crisis Years. Prior to the Crisis Years, the NSM built a somewhat even mix of tankers, cargo- and passenger ships. The same goes for the RDM and Wilton-Fijenoord, with the latter having more of a focus on passenger vessels. During the crisis, the NSM focussed more on tankers, as did the RDM. Wilton-Fijenoord built similarly low numbers of tankers and passenger vessels during the crisis. This was mostly due to tankers and cargo ships remaining a viable investment for shipping companies during the Crisis Years, whilst passenger vessels did not retain this value, as fewer people had the money for long-distance travel. The NSM and, to a lesser extent, the RDM, had established connections with shipping companies that utilised tankers, whilst a shipyard like Wilton-Fijenoord had fewer of these connections pre-established. This meant the NSM held an edge over competing shipbuilders during this time, facilitating their continued being of interest to shipping companies looking to order new ships.

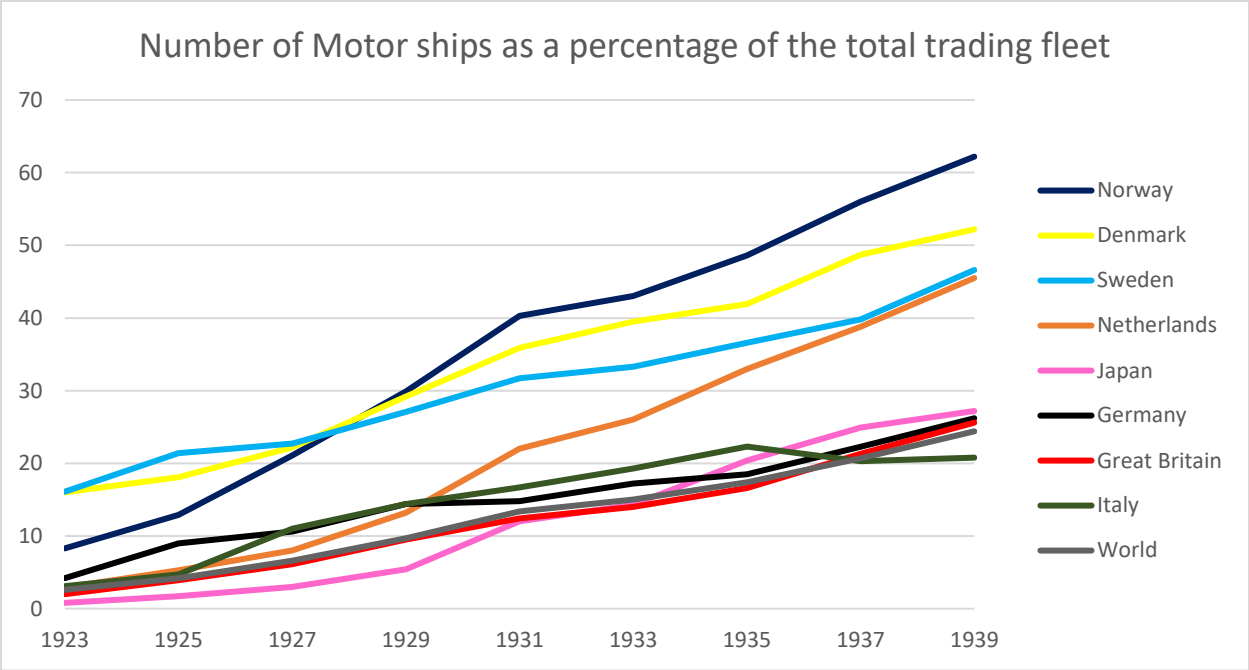
Other than ship-type, Dutch shipyards adapted different innovations to remain competitive. In her research on innovations in shipbuilding in the Netherlands, Mila Davids mentions multiple that were adapted to different degrees. She mentions the design-process through which ships were built, the increasing use of welding, rather than riveting, to connect metal parts in ships, the use of high-quality materials, and the introduction of diesel propulsion.[72] Not all of these innovations were adapted to the same degree: Dutch shipyards lacked design facilities of their own for a long time, and a lack of skilled welders meant that, although significant parts of ships ordered by the navy were welded, mentions of welding in documents detailing Dutch ship-design before 1937 are non-existent.[73] Dutch shipyards did, however, to varying degrees adopt other innovations mentioned by Davids: materials and propulsion, for differing reasons.

Firstly, Dutch shipyards were enthusiastic users of high-quality Siemens-Martin steel.[74] This was a far superior material to the previously-used iron and was available in high quantities for low prices due to the Netherlands close proximity to Germany, where production was ample

[72] Davids, *Knowledge Circulation: 5-11.*
[73] J Bruheze, H.W. Lintsen, A. Rip, J.W. Schot, "Het Scheepsbouwcomplex". J.W. Schot en A.A.A. de la Bruheze, red. *Techniek in Nederland in de Twintigste Eeuw, deel 6: Stad, Bouw, Industriële Productie*. Zutphen, 2003: 347-351.
[74] Stadsarchief Amsterdam, *Archief van de Nederlandsche Dok- en Scheepsbouw Maatschappij 1875-1999.* Ship design documents. (accesssed 26-05-2023).

and factories sold their surpluses on the cheap internationally. This ease of acquisition of high-quality materials made Dutch shipyards able to attract customers more easily, even as the production of this same steel domestically had to wait until 1939.[75]

The second enthusiastically embraced innovation propagated in the early twentieth century, was the development of diesel-powered engines. Diesel engines were more efficient than the earlier-prevalent steam engines and steam turbines. The engines had their disadvantages: Diesel engines did not generate significant torque at a small number of revolutions per minute, making it more difficult to operate at lower speeds. In addition, they were initially incapable of operating in reverse, meaning they were unsuitable for use in



4.2 *Motor ships as percentage of total trading fleet, per country and for the world as a whole, 1923-1939*

Source*:* R. Borrás, R. Rodríguez and M. Luaces, 'Starting of the Naval Diesel-Electric Propulsion. The Vandal' *Journal of Maritime Research* 8, no. 3 (Spain, 2011): 3-16.

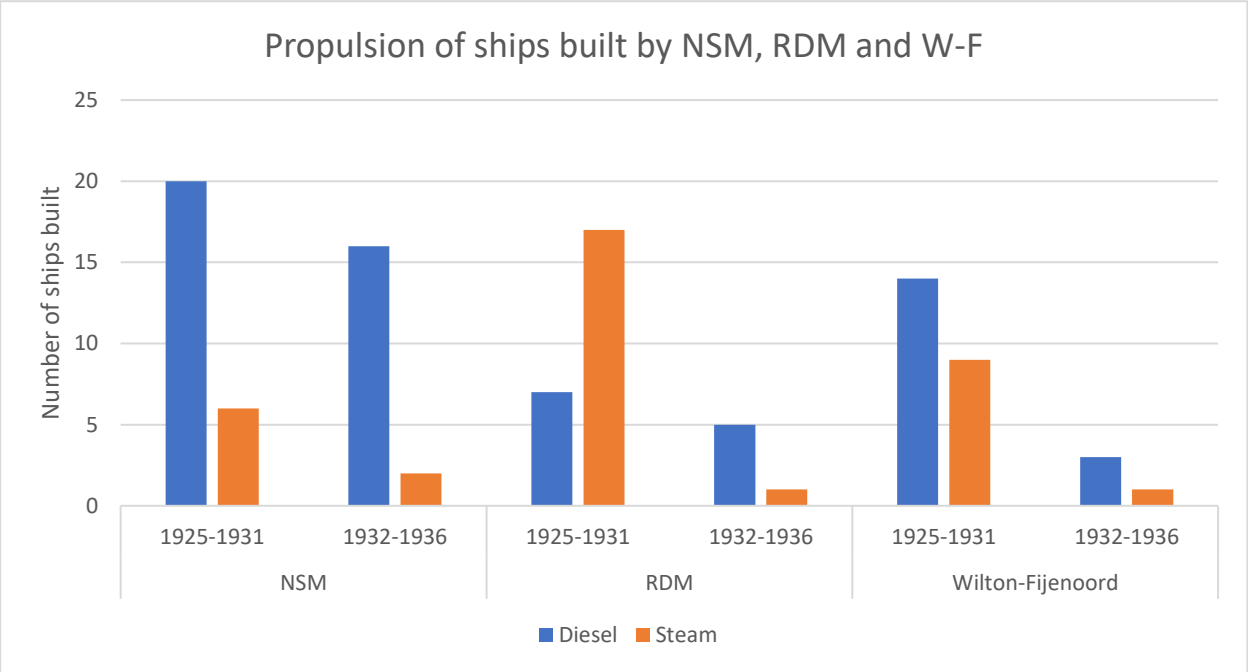
shipbuilding. The injection of the fuel into the engines was an issue as well, leading to significant delays in the adoption of diesel engine by shipbuilding companies for some time.[76]

These problems were fixed one by one in a matter of a few decades after the first diesel engines were built in the late nineteenth century, and by the 1920's, usage of diesel engines

[75] Davids, *Knowledge Circulation:* 5-7.
[76] R. Borrás, R. Rodríguez and M. Luaces, 'Starting of the Naval Diesel-Electric Propulsion. The Vandal' *Journal of Maritime Research* 8, no. 3 (Spain, 2011): 3-16.

steadily rose globally.[77] Early adopters of diesel engines were different Scandinavian countries, with both Sweden and Denmark having over 15% of their commercial fleets using diesel engines in 1923 already, at which point not even 3% of the Dutch trading fleet was made up of ships propelled by diesel.[78] The share of diesel-powered ships, often referenced to as motorships, as part of countries' merchant fleets can be seen in the graph below.[79] What this graph quite clearly indicates, is that the Dutch merchant fleet was part of a group of states' fleets that were hesitant, at first, to adopt the diesel engine, but Dutch shipping companies were quick to adopt the motorship in the late 20's and early 30's. Additionally, it shows the emergence of two groups: one where motorships were quickly adopted, and another group of countries where they weren't. Noteworthy is the relative lack of movement between the two groups, with the Netherlands being the only country moving from the 'small number of motorships'-group to the 'large number of motorships'-group. Davids indicates that the amount of steam-powered ships in the Dutch merchant fleet fell from 345 in 1915, to 319 in 1938.[80] This dip does explain a small part of the rise of motorships as a percentage of total Dutch shipping volume, but the larger part of this is the rise of the number of motorships during the same 23 years from 15 to 488.[81] By the end of the 30's, however, the Dutch merchant fleet had just about caught up with early adopter Sweden in how much of the fleet was made up of motorships, and firmly left the countries, amongst whose ranks the Dutch were in 1923, behind. This is not to say the Dutch merchant fleet of diesel-propelled ships actually outweighed the British of Japanese fleet, but as a percentage of the total tonnage, the Dutch shipyards had delivered a larger amount to the domestic trading fleet.[82]

[77] G. Henning and K. Trace, 'Britain and the Motor ship: A Case of the Delayed Adoption of New Technology?' *The Journal of Economic History* 35, no.2 (Cambridge, June 2005): 353-385.
[78] Henning and Trace, 'Britain and the Motor ship': 354.
[79] Ibidem: 354.
[80] Davids, *Knowledge Circulation*: 5.
[81] Ibidem: 5.
[82] Henning and Trace, 'Britain and the Motor ship': 354.



4.3 *Propulsion of ships built by the NSM, the RDM, and Wilton-Fijenoord both before and during the Crisis Years*

Source: Own calculations based on: The Excess Insurance Company, *Lloyd's Register of Shipping 1936 Steamers* (London 1936).

The advantages of diesel engines for ships were significant: diesel engines performed far more efficiently than steam turbines and steam engines did. This was due to the higher thermal efficiency of diesel, compared to conventional steam engines.[83] In addition, diesel engines consumed a smaller amount of fuel compared to steam engines, meaning ships built with a diesel engine had more range on the same volume of liquid fuel. Diesel engines were a lot safer than steam engines as well, as diesel engines did not produce sparks, significantly reducing the risk of fires. This was particularly important when transporting oil, an ever-increasing commodity during the early twentieth century.[84] Tank ships were well-suited to adopt diesel engines because of these reasons, and those were built in increasing numbers by Dutch shipyards.

An additional advantage of diesel engines was the expertise present in the Netherlands. Machine factory 'Werkspoor' was among the earliest builders of diesel engines. Many of the NSM-built ships in this period had their engines built by Werkspoor, or by other companies in cooperation with Werkspoor. The engines built by Werkspoor were of a high enough quality that

[83] Borrás, Rodríguez and Luaces, 'Starting Diesel-Electric Propulsion': 6.
[84] Davids, *Knowledge Circulation:* 5.

they were licensed by foreign companies as well. This was one area of modernisation of the shipbuilding industry in the earliest twentieth century where the Dutch industry was an innovator itself, and not a follower of outside trends.[85] This early application of diesel engines was a significant innovative move by Dutch shipbuilders, and Werkspoors expertise was of significant value to the Dutch shipbuilders. The quality of Werkspoor engines and the close relationship the NSM had with Werkspoor led to interesting occurrences, like the installation by the NSM of a Werkspoor engine in a ship built by the RDM.[86] This gives a clear indication of the edge the work the NSM performed held over other Dutch shipyards.

The NSM was at the forefront of the transition to diesel engines. Compared to rival shipbuilding companies, the NSM started building diesel-powered ships earlier and in larger numbers. From 1925 up to and including 1931, the NSM built twenty diesel-powered ships, compared to six steam-powered ships. During the crisis, the NSM built sixteen diesel-powered ships, compared to two steam-powered ships. The NSM's competitors built far fewer diesel-powered ships. the RDM and Wilton-Fijenoord built eleven and fifteen diesel-powered ships during this period as a whole, and eighteen and ten steam-powered ones. This means that together, they built fewer diesel-powered ships than the NSM on its own. (twenty-six versus twenty-eight)[87]

As seen in the short answer to the previous question, tankers made up an important part of the ships the NSM made built before the Great Depression, and during the Great Depression a large portion of the ships built was made up of tankers as well. The newer customers that were acquired during the Great Depression ordered different ships instead, both requiring ships to transport goods, not oil. In the yearly reports of the NSM, these projects are not mentioned individually, but they are taken as a group, with the report stating almost all of the contracts taken in this time are not making a profit. The report specifies that the relative prices in the Netherlands were (in 1935) starting to climb back to parity with prices for ships in other countries,

[85] Ibidem: 10.
[86] Nederlandsche Scheepsbouw Maatschappij, *Bestek voor de machine-installatie van 500pk van het stalen motorschip 'Moesie' voor de Koninklijke Paketvaart Maatschappij*. Ship design document. Amsterdam: Nederlandsche Scheepsbouw Maatschappij, 1929. From Stadsarchief Amsterdam, *Archief van de Nederlandsche Dok- en Scheepsbouw Maatschappij 1875-1999*.
[87] Excess Insurance, *Lloyd's*.

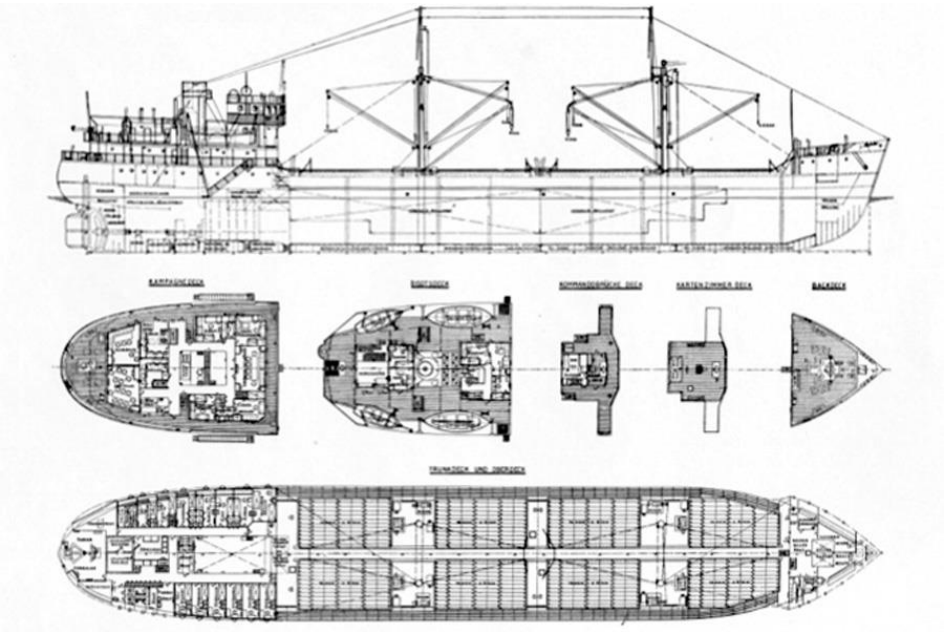
but that this mostly concerned larger ships, and that smaller ships (in the case of the NSM, the ships built for the USSR qualified for this, despite still having a displacement of about 5.000 tons) were still less profitable for Dutch shipyards to build, due to the devaluation of foreign currencies.[88]

The ships the NSM built for the Soviet Union are interesting with regards to their build as well. They were built according to a newer design, one the NSM patented in multiple different countries.[89] The design was special, because it was optimised to save as much space for the goods as possible. In contrast to contemporary designs, the loading doors were enlarged so as to make the cargo bay more accessible, combined with making the cargo bay as square as possible, so as to make it have as little empty space in there whilst fully loaded up. In a similar fashion, the cargo bay was emptied of machinery to have as few nooks and crannies in the hold to make sure as little space was wasted. The size of the hold doors almost matching the size of the hold itself also made it a lot faster to load and unload the cargo from the ship.[90] In conjunction with the improved carrying capacity of these ships (contemporary wood-transport ships could only fill about three-quarters of their holds due to badly optimised design), the ships were also built to withstand icy seas and temperatures as low as -20 degrees Celsius. The hull was designed so as to be able to plough through ice as well.[91] This because the ships were meant to transport wood from Amsterdam to Leningrad, meaning the ships needed to be able to travel during very low temperatures as well as in icy circumstances. The first order of two ships of this type was followed by another later in the year as well.

The design of these ships being new was interesting to the Soviet leadership to such an extent, that they ordered a few, with promises to buy more ships at the NSM in the future. This is one of the ways the NSM managed to distinguish itself to such an extent it managed to attract

[88] H. Goedkoop and D. Goedkoop, *Verslag aan H.H. Aandeelhouders over het Twee-en-veertigste Boekjaar der Vennootschap*. Financial Report. Amsterdam: Nederlandsche Scheepsbouw Maatschappij, 1936. From Stadsarchief Amsterdam, *Archief van de Nederlandsche Dok- en Scheepsbouw Maatschappij 1875-1999*. (accessed April 21, 2020).
[89] NDSM-Werfmuseum, *NDSM-Werfmuseum*, 'Cornelis Douwesweg 1922 B'. April 2011. http://www.ndsm-werfmuseum.nl/cornelis-douwesweg-1922-b (Accessed 20-12-2020).
[90] Leo van der Spek, *Stichting NDSM Herleeft*, 'Het Russische Motorschip Walerii Meshlauk'. 2019. https://www.stichting-ndsm-herleeft.nl/het-russiche-motorschip-walerii-meshlauk (Accessed November 11, 2022).
[91] Ibidem.

new orders. The other orders the shipbuilding company acquired in this time were not from shipping companies that required the NSM to design new ships themselves, but the company board does state that its use of its own design capabilities is something to be expanded upon.[92] The design of these ships was not fully done by the NSM itself, instead being done in cooperation with Bruynzeel, a Dutch company specialising in woodworking, as these ships were built to transport wood specifically.[93]



4.4 *Plans of the Walerii Meshlauk*

Source: NDSM-Werfmuseum, NDSM-Werfmuseum, 'Cornelis Douwesweg 1922 B'. April 2011. http://www.ndsm-werfmuseum.nl/cornelis-douwesweg-1922-b (Accessed 20-12-2020).

The NSM stood out internationally and from other Dutch shipyards due to their experience with different ship-types, as well as their willingness to adopt innovations. Their early adoption of diesel-engines, and close working relationship with Werkspoor allowed them to pull ahead of other shipyards. This went as far as the NSM being asked to install the engine into ships built by other shipbuilders, such as the RDM, which before the crisis still mainly built steam-engine ships.[94] The ships built by other shipbuilding companies during the Crisis Years were also often motorships, yet those were built later into the crisis, when the economy had started to recover, whilst the NSM was able to market their motor ships earlier during the crisis. They held

[92] Bruning, *40 Jaar NSM.*
[93] Ibidem.
[94] Nederlandsche Scheepsbouw Maatschappij, *Bestek voor Moesie*.

an edge over the competition with their extensive previous knowledge of building motor ships.[95] In addition to this early adoption of the diesel-engine, the NSM also held experience with more competitive ship-types, like tankers and cargo ships, that other shipbuilders in the Netherlands, including the ones that were more involved in building diesel-engine ships before the Crisis, did not. The NSM positioned itself apart from shipyards such as Wilton-Fijenoord by virtue of being more all-round focussed between Cargo- Passenger- and Tanker ships.[96]

Both their earlier adoption of the diesel-engine, as well as their experience with different ship-types, helped the NSM attract orders, but what sealed their advantage over other Dutch shipyards was their willingness to go beyond merely adopting modern innovations. The NSM themselves also innovated during the Crisis, working together with Bruynzeel to design improved ships that were interesting to parties previously not used to ordering Dutch ships. These novel ship-types meant that where it counted, the NSM held an edge over its domestic competitors that allowed it to outperform them during the Crisis Years.

[95] Ibidem.
[96] Excess Insurance, Lloyd's

5. In what other ways could and did shipbuilders distinguish themselves?

The question discussed in this chapter is: How did the NSM distinguish itself from other Dutch shipbuilding companies, such as the RDM? This question will be necessary to show not just how the NSM operated in a vacuum: there were more Dutch shipbuilding companies, multiple of which could cater to international orders, but most of them failed to do so in significant numbers, with none of them coming even remotely close to the numbers achieved by the NSM. To answer this question, I will explore what the NSM did differently in terms of ship production, organisation of the company and international profiling. Additionally, it will be important to keep an eye on what made the NSM among Dutch shipbuilders.

In previous chapters, it has been illustrated that the NSM was one of the most productive shipyards in the Netherlands. Both in terms of number of ships, as well as in terms of total tonnage of ships built, the NSM is at the top of the field for Dutch shipyards. Competitors, like the RDM, did not build as high a tonnage as the NSM did, despite building more ships in total. Other shipyards do not even come close to either tonnage or number of ships the NSM built. Even during the Depression, the NSM built 114.000 Gross Register Tons of ships, more than two thirds the production the RDM had before the Depression. This disparity between the NSM at the time, and its largest competitor, the RDM, is extreme. This disparity in tonnage before (near 250.000 GRT vs. slightly over 150.000 GRT) and during (about 110.000 GRT vs. under 30.000 GRT) the Great Depression is even more striking when comparing the number of ships built as well. The NSM built 33 ships before the Depression, compared to the 37 ships the RDM built. Yet, the NSM built more than 90.000 GRT of ships more, averaging 7.500 GRT per ship for the NSM and just over 4.000 GRT per ship for the RDM.[97]

It is interesting that the NSM built larger ships than other shipyards, though it is not the only reason why the shipyard outperformed its competitors and managed to attract international orders in times of crisis. The type of ships built is also an indicator of why the shipyard managed to attract international attention as well. The NSM built for only six customers during the Depression, three of which were foreign. Most of the ships built by the NSM during this time were tankers, a relatively new branch of shipbuilding, and one that, rather than shrinking during

[97] Ibidem.

the Great Depression, actually grew.[98] The expansion in this segment prior to the Depression, and the establishment of clients interested in these ships was very important to the continuation of orders coming in for the NSM. The Anglo-Saxon Petroleum Company and Westfal-Larsen were among the customers ordering tankers both prior to the Great Depression and during it. The orders of tankers did not discontinue during the Depression, despite the drop in global shipping that accompanied the Depression. This was because the shipping and use of oil in this time was on the rise.

The NSM had other factors working in its favour during this time. The mayor of Amsterdam, a Dutch politician also having a seat in one of the houses of parliament, was part of the board of the company.[99] This political influence is not necessarily a boon, but the mayor of Amsterdam at the time was very business-oriented, as well as having been active in the shipbuilding sector, his father previously working as a carpenter at the Royal Shipyard in Amsterdam. The mayor did, during this time, visit the Soviet Union. In his book on the mayor of Amsterdam during this time. Kaal writes that the mayor went on this visit on behalf of the NSM formally because the chairman of the NSM was indisposed, but Kaal claims that sending the mayor of Amsterdam had other aims as well. One of these was acting as a Dutch representative to Moscow, amounting to a sort of half-recognition of the Soviet Union during the time that the Netherlands themselves did not actually recognize the state.[100] The municipal council was involved in these negotiations as well, as Kaal reports that by 1934, the NSM actually stood on the edge of foreclosure, and contemporary newspapers had been reporting the NSM's imminent closing for some months[101] at the point the council called upon the head of the NSM board to speak with him and see if there was something to be done about the looming end of the company.[102] The municipal council wrote a report that was held secret for fear of the shipyards

[98] Stig Tenold, 'Crisis? What Crisis?'
[99] Goedkoop and Goedkoop, *Verslag over het Een-en-veertigste Boekjaar.*
[100] Kaal, *Hoofd van de Stad.*
[101] 'Sombere Vooruitzichten voor de Nederlandsche Scheepsbouw Maatschappij, *De Banier* 12-10-1934;'Nieuw Schip bij de Nederlandsche Scheepsbouw Maatschappij', *De Banier,* 02-11-1934; 'Ontslag van Negenhonderd Arbeiders', *De Locomotief,* 13-10-1934; 'Nederland als Duurteland', *De Locomotief*, 29-10-1934; 'Let op uw Saeck!', *De Locomotief,* 31-12-1934.
[102] 'De Moeilijkheden der Nederlandsche Scheepsbouw Maatschappij', *Gooi en Eemlander*, 02-11-1934.

in Rotterdam noticing the opportunity and seizing it for themselves, rather than having the Amsterdam-based NSM gain these orders.[103]

The report was kept secret for other reasons than just the controversy of the mayor's journey to the Soviet Union. After all, the mayor was sighted in Leningrad and when the councillors found out, they didn't seem too bothered by his visit.[104] Rather, the rivalry between Rotterdam and Amsterdam played an important role in this secrecy. The shipyards in Rotterdam were, like the NSM, in big trouble during the Great Depression, as can be seen by the lack of shipbuilding by for example the RDM during this time. The harbour in Rotterdam was better suited for Russian orders, according to a report on the potential the Soviet Union could offer at this time, which was worrying for the Amsterdam councillors and the NSM both.[105] The report was therefore kept secret, so as not to inform people from Rotterdam of the opportunities they were better suited to exploit.[106]

In Rotterdam, meanwhile, similar calls for increased ties to the Soviet Union were made. However, unlike in Amsterdam, the Rotterdam city council did not endorse any rapprochement to the Soviet Union, arguing that the propaganda value of such endorsements of relations with the new Russian government was too great.[107] This, despite leftist members of the council filing a motion to approach the government with an appeal to recognise the Soviet Union. Similar motions were filed in different parts of the country, Amsterdam being among those cities were communist council members attempted to push the city government to petition the national government towards a more conciliatory stance towards the Soviet Union. In an example of one of these motions, made during the private session of the Amsterdam council, council member Wijnkoop of the communist party acknowledged that this motion was partly filed, 'with political motives', but added that the recognition of the Soviet Union would be greatly beneficial to the Amsterdam industrial sector as well.[108] Even in Amsterdam, despite the mayor having recently

[103] Griffie Amsterdam, *Notulen van de Besloten Vergaderingen 1931-1952*. City Council Minutes. Amsterdam: City Council, 1952. From Stadsarchief Amsterdam, *Archief van de Gemeenteraad 1814-1982*.
[104] Gerard Jacobs, 'Hollandse Schepen naar de Goelag', *Historisch Nieuwsblad* (January 28, 2009). https://www.historischnieuwsblad.nl/hollandse-schepen-naar-de-goelag/ (Accessed 21-06-2021).
[105] Kaal, *Hoofd van de Stad*.
[106] Griffie Amsterdam, *Notulen van de Besloten Vergaderingen 1931-1952*.
[107] 'Rotterdam en de Handel met Sowjet -Rusland', *De Tribune*, 03-01-1934.
[108] Griffie Amsterdam, *Notulen*.

visited the Soviet Union in support of Amsterdam businesses, these motions were defeated with considerable margins. In this light, actions of local government officials speak louder than city council political statements, as evidenced by the refusal to approach the government in favour of Soviet trade, whilst still benefitting from local ties to the Soviet government. Yet, in Rotterdam, such actions were not undertaken, whilst in Amsterdam, due to the interwovenness of local business and local government, they were.[109] In fact, though mayor Fortuyn of Rotterdam was involved in promoting the interests of the Rotterdam harbour, his approach never went as far as de Vlugt's did. The two mayors were on opposite sides of a few competitions between the cities, like the effort to procure the official national airport, which Amsterdam won, and, importantly in this case, to attract orders for shipyards and for the shipping of wood, which Amsterdam attained by virtue of de Vlugt's journey to Moscow.[110] Interestingly, the two mayors worked together to oppose Antwerpen in attempting arrange trade treaties with the government there with regards to Rhine trade.[111] However, promoting Rotterdam's interests in the Soviet Union went too far for the Rotterdam city government, as calls to tighten relations in an effort to attain the status as most important port for the Russians in Europe, following the severing of those relations with Hamburg on the accession of the new Nazi government in Germany, were ignored.[112]

The journey was not just controversial because of the lack of recognition of the Soviet Union, but the mayor was a member of the Anti-Revolutionaire Partij, the ARP, which was both confessional and very conservative. The ARP was one of the parties in power at this time, with mayor de Vlugt personally knowing the Dutch prime minister, Colijn, as well. The domestic minister of the Netherlands at this time, expected to be subjected to questioning as to the nature of the journey the mayor made by the members of parliament, according to Kaal.[113] A member of the party of the prime minister going to a state the cabinet has no official contacts with, negotiating for an order for a local company, keeping both the journey and the report about the journey secret, is an interesting development. This development might be explained by the NSM at this time being desperate for new orders, as the shipyard according to Kaal was almost going

[109] Harm Kaal, *Running the big city: The Dutch pre-war mayoralty under construction* (Amsterdam, 2009): 9.
[110] Kaal, *prewar mayorality:* 7-9.
[111] Kaal, *prewar mayorality:* 9.
[112] 'Rotterdam en de handel met Sowjet-Rusland', *de Tribune*, 03-01-1934.
[113] Kaal, *Hoofd van de Stad*.

to close.[114] In addition, the Soviet officials drove a hard bargain with the shipyard's director's son,[115] and were the ones to demand that a political delegation was sent along, as a concession to the Russians.[116] Director Goedkoop himself mentions that the mayor had proven them a great service, accompanying the negotiations.[117]

Not only did the NSM manage to send a political figure to the Soviet Union at a time when this was highly uncommon for the Netherlands, the ships they built for the Soviet Union are interesting to take a look at. These were three ships built for transporting cargo, and their design was somewhat of a departure from ordinary shipbuilding, to such an extent that the NSM pursued patents on its design in all other countries with a significant shipbuilding industry, according to the people maintaining the website detailing the NSM's history. The ships built were specifically designed to transport wood. This innovation, but also this secret mission, saved the NSM from bankruptcy in a time when there were no other contracts to occupy its shipyard. That the buyer of these ships came from the Soviet Union at this time is no accident: The Soviet Union did not suffer from the Depression the way other states did.[118]

In addition to the mayor going to Russia to negotiate orders for the NSM, the municipal council also authorised a loan, on behalf of the city, of almost 480.000 guldens, to make sure the NSM had the means to build the ships that had been ordered.[119] Despite the incoming new orders, the NSM did need additional funding, as it was not possible to attract foreign orders for profit. The low value of the pound in conjunction with the government's refusal to devalue the gulden meant that any orders not issued in guldens, but instead in the prevalent currency of global shipbuilding, the pound, would not net the shipbuilder a profit, but merely kept the yard busy in anticipation of future revenue. This anticipation would eventually come to fruition in later years, as the Dutch government did eventually decide to devalue and domestic orders did pick

[114] Ibidem.
[115] 'De Heer Goedkoop uit Rusland terug', *Telegraaf*, 23-02-1935.
[116] 'De Reis van Dr. De Vlugt', *Telegraaf,* 01-02-1935.
[117] 'De Heer Goedkoop uit Rusland terug', *Telegraaf*, 23-02-1935.
[118] T.W. Zeiler and D.M. Dubois, *A Companion to World War II* (Chichester, 2013): 47-63.
[119] 'Steun aan Scheepsbouw', *Scheepsbouw*, 07-06-1935.

up again, but in the meantime, the NSM needed additional funds to make sure the yard did not have to close.[120]

Not just did the municipality loan the NSM money in order to build the Soviet ships. In addition to the loan, the city of Amsterdam offered guarantees to the Soviet Union of compensation in case the ships were not delivered in time, in case the ships did not, four months after delivery, reach the numbers agreed upon in the order for the ships, and in case the NSM was not able to pay the Soviet government back those costs, the Soviet Union incurred whilst procuring the required materials for the building of the ships.[121] This indicates that, following the negotiations by the mayor in Russia, local government continued to support the NSM even in the completion of the orders themselves, and shielded the company from potential negative consequences of the inability to meet the orders. This government support is what director Goedkoop of the NSM repeatedly appealed the national government for in the paper at the time.[122] The involvement of the mayor of Amsterdam does, in light of the guarantees given by the city, seem to have been required by the Russian government not merely for propaganda- and political purposes, but for ascertaining the deal would in no scenario negatively affect the Soviet Union if the NSM did not manage to fulfil its end of the bargain.

The mayor visiting the Soviet Union to help an Amsterdam-based shipyard attract orders for new ships did not go unnoticed among the wider public. News coverage of his visit to Moscow and Leningrad did not fail to see the oddities of a Dutch government official, of the same party colouring as the prime minister of the country, to a state unrecognised by the Netherlands. It was from the confessional side of the political spectrum the mayor had the most to fear, as Catholic newspaper 'de Tijd' chastises its reading public about the amount of trade the Netherlands conducts with the Soviet Union, claiming 'we are far removed from Christian trading morals'.[123] The paper specifically mentions the orders Dutch shipbuilders received from the Soviet Union. The same paper quotes its protestant counterpart 'de Christelijk-Historische Nederlander' in critically asking questions of how the journey of a Dutch government official as a representative

[120] Ibidem.
[121] Ibidem.
[122] 'Nederland als Duurteland', *De Locomotief*, 29-10-1934.
[123] 'Sovjet-Handel', *de Tijd*, 19-04-1935.

of a private company should be seen and if this is not an affront to the dignity of the office of mayor.[124]

In stark contrast to this centre-political condemnation, the left- and right-hand sides of the political spectrum seemed supportive of the mayor's trip. Leftist newspaper 'de Tribune', which had been very critical of mayor de Vlugt before, [125] now praising the mayor and director Goedkoop, saying about the latter that he 'belongs to those capitalists […] that are not as short-sighted as the reactionaries that don't want to hear about any treating with the Soviet Union […].'[126] On the exact opposite side, paper of the Dutch National Social Movement (NSB) 'Volk en Vaderland' argues it does not approve of the mayor as a political figure but the paper does 'think it praiseworthy of Mr de Vlugt that he used his vacation to attract orders to a company where he holds a position.'[127] The newspaper used this praise to contrast the willingness of the Amsterdam mayor to the stubbornness with which his fellow party member Colijn maintains government policy that, according to Volk en Vaderland, increased the unemployment in the Netherlands, arguing: 'rather an order from Russia, than more of our people unemployed on the streets. Those ships will be built anyways, if not in the Netherlands, then somewhere else.'[128]

Now, something in the previous paragraphs needs an explanation, for the NSM was on the edge of bankruptcy at this time, despite being the most productive Dutch shipyard at this time. How could the other shipyards in the Netherlands survive, if the most prolific shipyard was having trouble making ends meet? This oddity can be explained by the type of shipyard the NSM was. The RDM and other competing shipyards, were both shipbuilders and ship-repairers. The NSM was only a shipbuilder. This explains a few things: In times of crisis, older ships remained afloat longer, requiring more repairs, and therefore, shipyards that had a branch dedicated to ship-repair, were better off. This is what the board of the NSM itself also mentioned in its yearly report in 1934.[129] The yearly reports of the RDM show as much as well. The RDM reports that the

[124] 'Burg. De Vlugt', *de Tijd,* 28-01-1935.
[125] 'Mussert en de Vlugt', *de Tribune,* 12-02-1935.
[126] 'P. Goedkoop uit Moskou terug', *de Tribune*, 25-02-1935.
[127] 'Contact met Rusland', *Volk en Vaderland*, 02-02-1935.
[128] Ibidem.
[129] Goedkoop and Goedkoop, *Verslag over het Een-en-veertigste Boekjaar*.

ship-repair branch of the company is the part that is enabling them to maintain their solvency during this time of crisis.[130]

Interesting too, about the yearly reports the NSM presented, is that, despite the city council of Amsterdam being very worried about one of the largest employers in the city going bankrupt, no mention is made of potentially closing the shipyard. It is clear that the shipyard has fallen on hard times, as the yearly reports show the NSM losing money for several consecutive years, and saying that, if the government doesn't act, the Netherlands would see its shipbuilding industry reduced to a minimum. The municipal council of Amsterdam did, during this time, extend the NSM a credit of one and a half million guldens, something the NSM also fails to mention in their reports.[131]

The NSM attempted, during this period, to introduce cost-cutting measures in order to maintain some competitiveness abroad. This was achieved in part by reducing the amount of money spent on personnel. Director Goedkoop mentions that the NSM managed to reduce its wage bill by 50%. This decrease in wages is attained in part by reducing the wages of the workers still at the yard. At the time Goedkoop mentions this in the paper, there are still about 900 workers still working at the NSM. This is a mix of employees (people on the regular payroll at the company, receiving a monthly salary) and labourers (people on a less permanent hire, receiving a weekly salary) in the company's employ (about 60 employees and 840 labourers).[132] This is down from about 2325 workers in 1930.[133] (about 125 employees and 2200 labourers) With this significantly reduced number of workers, the company did maintain an occupation of its slipways of about 75%. Similarly, despite the amount of material processed in building the ships in 1934 being only about half of what it was in 1930, the material processed per employee and per labourer peaked in 1934.[134]

What can be seen as a sign of the situation the NSM was in during this time are the remarks the board made with regards to the ships that are being built during this time. The board said that for more complicated ships, like large passenger vessels, Dutch shipyards still couldn't

[130] Bruning, *40 Jaar NSM*; RDM, *50 jaar "Droogdok"*.
[131] Kaal, *Hoofd van de Stad*.
[132] Bruning, *40 Jaar NSM*.
[133] Ibidem.
[134] Ibidem.

produce profitably, however, for smaller ships, the Dutch shipyards couldn't compete with foreign companies, as the prices for labour in the Netherlands were still relatively high compared to other states.[135] This implies that the smaller ships the yard built during this time, that is to say, the ships built for the Russians, were not actually profitable for the NSM. This explains the credit that had to be provided to the company during this time as well, and it illustrates well how badly the NSM was actually doing during this time, despite not seeming to make too large a loss yearly, if the reports are to be believed. Rather than merely having to eat into the reserves, like the reports seem to imply, the NSM had to take on orders that did not make a net profit, due to the otherwise idling shipyards. If the NSM had not taken on the orders, they would have lost a lot more, meaning that they had to take on orders that lost them money as well.

As mentioned in the first chapter, the NSM did not have a repair branch at the yard. This meant that the yard could not depend on that branch during times of economic downturn. Other shipyards, like the RDM and Wilton-Fijenoord, had repair branches that helped the yards through these times. The domestic clients the shipyards had, stopped ordering new ships during the Crisis years, since their incomes decreased as well. Shipping companies no longer wanting to order new ships meant that they kept their existing fleets afloat for longer. This in turn meant they needed repairs more often, which was something the yards could rely on whilst not having any new orders. The NSM, in contrast to the other yards, could do no such thing. Therefore, employees entitled to continued pay at other shipyards could be put to work at the repair-branches, whilst these employees at the NSM would not bring in any kind of money for the NSM if the company did not manage to acquire new orders. This was the primary motivation for the NSM to get orders acquired with different international buyers.

This is to say that the NSM did clearly distinguish themselves from other Dutch shipyards. They managed to get a prominent politician involved in the survival of their company, getting him on the board of directors and sending the senator to a state that wasn't even recognised by the very government his party was a part of. This propagation of the interests of the NSM wasn't the limit of local government support, however, as the company did not just have the city

[135] Goedkoop and Goedkoop, *Verslag over het Een-en-veertigste Boekjaar*; Goedkoop and Goedkoop, *Verslag over het Twee-en-veertigste Boekjaar*.

government represent the NSM in Moscow, but also managed to get the municipal council to authorise significant financial guarantees as well as loans to the company. Extensive government involvement with, and support of, the NSM was paramount in managing to have the company survive one of the most challenging periods of the 20th century not just intact, but connected to new markets that, had it not been for the Second World War interrupting foreign trade significantly, could have sustained the company on the longer term as well. The NSM distinguished themselves in more ways than this one, however. Not only was the NSM building ships that were innovative enough to apply for patents in multiple states, but they also required orders to stay operational as the NSM was strictly a shipbuilding company. This is a distinguishing factor, though it is a negative one, since the lack of a ship-repair section to the company meant that, if they hadn't gotten any orders in this time, the company would in all likeliness have had to default on its rising debts. The NSM distinguished themselves by taking on orders that weren't profitable, but that did allow the company to stay afloat. In a sense, the reason the NSM was able to get more international orders than any other Dutch company, was because the NSM had to. They didn't have the option to sit back and rely on repairs for a while, and therefore had to innovate and build new ships that, whilst not being profitable right now, did allow them to establish business connections with a whole new part of the market in Russia, as can be seen from the later orders the NSM reports in its yearly reports, where more orders from the Soviet Union can be seen to have been allocated to the NSM.[136] On an added note, the NSM did see that it suffered a weakness from the lack of a ship-repair branch in potential income, as can be seen by the post-war merger of the NSM and the NDM. The merger combined the NSM as a shipbuilder with the NDM, which both built new ships, and had a significant portion of the company involved in ship-repair.

[136] H. Goedkoop and D. Goedkoop, *Verslag aan H.H. Aandeelhouders over het Vier-en-veertigste Boekjaar der Vennootschap*. Financial Report. Amsterdam: Nederlandsche Scheepsbouw Maatschappij, 1938. From Stadsarchief Amsterdam, *Archief van de Nederlandsche Dok- en Scheepsbouw Maatschappij 1875-1999.* (accessed April 21, 2020).

6. Conclusion

The Great Depression had a significant impact on the Dutch economy. All parts of it suffered from the effects of the Crisis Years, as they would be known in the Netherlands. The Crisis Years were further ameliorated by the fiscal policy of the Dutch government. They contended the way to best combat the effects of the crisis, was to maintain the Gold Standard and corresponding measures. These measures did little to protect internationally-oriented Dutch manufacturing however, and the rise of real wages along with less and less optimal exchange rates meant this was a difficult time for companies to maintain solvency when dependant on international orders.

The Great Depression had a heavy impact on the shipping industry. Countries saw their economies deteriorate and closed their borders to international trade. This meant that shipping companies saw a large decrease in revenues, which in turn affected shipbuilding companies, as orders were postponed until more profitable times. Dutch shipyards suffered from this especially, as the monetary policy of the Dutch government meant they could either opt to choose to build at a loss, or not build ships for foreign customers at all.

Before the Crisis Years, multiple Dutch shipyards were active internationally. The NSM was one of many, yet maintained a somewhat different modus operandi than other shipyards. Where yards such as the RDM built for a plethora of international customers, but usually only attracted orders for single ships, the NSM built larger quantities of larger ship for fewer international customers. All larger Dutch shipyards built ships for a combination of domestic and foreign customers, but only the NSM built in larger quantities per customer. This standing-out of the company already distinguished it from its domestic competitors.

As the Crisis Years commenced, the NSM managed to continue working on and acquiring new orders from different foreign customers, whilst their domestic shipbuilding competitors by and large stopped doing so. This seems odd at first glance, but the NSM is the odd one out here, as the rival shipyards all had something the NSM lacked: a repair-branch. This enabled them to ride out the wave of unprofitability on shipbuilding orders by repairing the ships that still were in service, which often, during crises, continued in service for longer. The NSM could not do this and had to, therefore, commit to new orders, often at a loss to the shipbuilding company. The choice

for the leadership of the NSM was a simple one: The first option was to idle the yards, which meant paying the employees that were directly employed by the NSM and therefore entitled to a salary, whether there was work at the yard or not. The second, and chosen, path, was to build ships at a loss, still recouping some money to pay those same employees, but now not having to pay all of it by itself, as the pay for the ship accounted for some part of the salaries. The choice was easy to make, and the city of Amsterdam helped out financially as well, making sure the shipyard did not have to cease work altogether during this time.

Whilst it was necessary for the NSM to attract orders to make sure the shipyard could continue to exist, these were difficult to come by. The companies that had ordered the largest number of ships before the crisis, either ceased ordering entirely, or ordered far fewer ships. The NSM therefore had to get creative to acquire business during the crisis. They did so by changing the types of ships built, from building liners and transport ships before the crisis, to more of a focus on new ship designs during the crisis. They built more tankers during the Crisis Years, and innovated with ship-designs as well. They helped the number of motorships in both the Dutch and the Norwegian commercial fleet increase during this time as well. This willingness to innovate during times of crisis helped the NSM acquire those orders that were available in a very competitive, and badly disturbed market.

The NSM had an additional advantage to use to acquire orders during these times: They benefitted from institutional political connections, that both they, and said connections, were willing to use. The visit of mayor and senator of the governing party de Vlugt proved to be essential in convincing Soviet government officials to grant the NSM orders for three ships of an innovative design. The willingness of the municipal government to assist the NSM with both money and political representation, meant that the company was well-poised to find partners to order from them internationally. The national response to this order-hunting in countries the national government was not favourably disposed towards was received favourably by the political fringes, yet the news-media most closely aligned to the mayor's own party were critical of these actions.

The answer then, to the question 'How did the NSM maintain its international competitiveness and outcompete the other Dutch shipbuilding companies during the Great

Depression and its knock-on effects on the international character of Dutch shipbuilding?' is found in a variety of factors, that can be summarised in three different aspects: innovation, connections, and necessity.

The first of these is innovation. The NSM was willing to take certain risks and choose for an innovation-centric approach to business during the Crisis Years. Their willingness to construct ships to a new design, as well as their adoption of the diesel engine and tanker ship-type aided their continued shipbuilding at a time few other shipyards managed to do the same. The NSM managed to distinguish itself from other constructors when acquiring orders by making sure the ships they built were among the most modern possible at the time.

The second factor is the willingness and ability to utilise previously established institutional connections for the benefit of the company, as well as convincing said institutional connections this would be to mutual benefit. The mayor of Amsterdam did not merely travel to Moscow to make sure the NSM had orders, but also to make sure the status of Amsterdam as a pre-eminent shipbuilding city, as well as the conditions of its citizens employed in that industry, were looked after. This might seem like stating the obvious, when using such institutional connections can be perceived to be in everyone's best interest, but the travel of de Vlugt to Moscow was ill-perceived by supporters of his own party. This conviction that it was still a beneficial act, in spite of a potentially negative response, helped the NSM in a major way, staving of bankruptcy.

The third and final factor determining the NSM's competitiveness in a shrinking market, is the sheer desperation of their situation. The NSM had little choice but to pursue these orders, in spite of their unprofitability. The firm did not have the means to fall back on an industry related to its primary interest that would have them be able to survive the crisis far easier. Other shipbuilder could revert to primarily repairing ships in the time between high-conjunction cycles, whilst the NSM could not. The third factor therefore is not a positive one, increasing a firm's competitiveness. Rather, it is a lack of a back-up option that makes the company's position bad enough that it has to take on orders that do not generate a profit to make sure the company can stay active.

The concrete implications of these conclusions are that they constitute somewhat of a shortlist to crisis-proofing a business. They imply companies should not fear innovation in the face of adversity, as it will allow them to find a niche in a market that is otherwise satiated. At the same time, whilst convincing a senator to visit a hostile country for your business would nowadays be seen as corrupt, acquiring and utilising favourable connections for the business is highly profitable for any company, and should not necessarily be punished. Lastly, it never hurts for a business to plan for temporary redundancy of its primary occupation. In the case of the NSM, setting up a repair-branch to avoid having to take on unprofitable orders would have benefitted them greatly. In a generalised case, finding industries related to the primary business of a company that will be in greater demand during times of crisis will be a boon to the company when otherwise, it would struggle for solvency when business dries up.

These suggestions are based on a single case-study and during a single crisis, meaning they might need further support before being taken as final truth. Further research could focus on different crises in the same sector, like the crisis in shipbuilding in the Netherlands during the oil-crisis of the 70's. Additionally, researching other industries during the same or different crises might give some indication to the veracity of these conclusions and their potential applications to other scenarios than the one of the NSM during the Crisis Years.

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Appendix 1

Year	*RDM*	*RDM-index*	*W-F*	*W-F-index*	*NSM*	*NSM-index*
1929	€ 1.033.333,32	100	€ 1.838.400,00	100	€ 516.326,01	100
1930	€ 495.000,00	48	€ 1.780.120,00	97	€ 586.847,82	114
1931	€ 137.500,00	13	€ 569.549,00	31	€ 348.433,65	67
1932	€ 192.500,00	19	€ 226.440,00	12	€ 81.958,54	16
1933	€ 192.500,00	19	€ 46.412,00	3	€ -38.077,24	-7
1934	€ 165.000,00	16	€ -460.000,00	-25	€ -194.879,98	-38
1935	€ 275.000,00	27	€ -316.151,00	-17	€ -261.476,75	-51