This file was downloaded from the institutional repository BI Brage - <a href="http://brage.bibsys.no/bi">http://brage.bibsys.no/bi</a> (Open Access)

# Business history and economic globalization

# Espen Ekberg BI Norwegian Business School

Even Lange University of Oslo

This is the authors' final, accepted and refereed manuscript to the article

published in

Business History, 56(2014)1: 101-115

DOI: http://dx.doi.org/10.1080/00076791.2013.818418

The publisher, Taylor & Francis, allows the author to retain rights to "post your revised text version of the 'postprint' of the Article (i.e., the Article in the form accepted for publication in a Taylor & Francis journal following the process of peer review), after an embargo period commencing 12 months (STM and behavioural science) or 18 months (SSH) after first publication (either in print or online)The journal is available online at: <a href="www.tandfonline.com">www.tandfonline.com</a> with the open URL of your article". (Publisher's policy 2011).

## **Business History and Economic Globalisation**

Espen Ekberg\* and Even Lange\*\*

\* Centre for Business History, Department of Innovation and Economic Organisation, BI Norwegian Business School, Oslo, Norway

\*\* Department of Archaeology, Conservation and History, University of Oslo, Norway

Corresponding author: espen.ekberg@bi.no

\*Espen Ekberg is a researcher at the Centre for Business History, BI Norwegian Business School, Oslo. He earned his PhD in Economic History from the University of Oslo in 2008. His main fields of research have been the history of the consumer co-operative movement in Norway and internationally, as well as the history of Norwegian and international merchant shipping. He is currently working on a research project about the history of the Norwegian insurance industry.

\*\*Even Lange is a Professor of Modern History at the University of Oslo. He is the founder and former director of the Centre for Business History at BI Norwegian Business School. His earlier research topics include industrial development, banking, consumer co-operatives, merchant shipping and economic policy in the nineteenth and twentieth centuries. Lange is currently working on the biography of the former Norwegian Prime Minister, Kåre Willoch.

## **Business History and Economic Globalisation**

Recent reviewers of the current state and future direction of business history have complained that, despite the growth of business history as a distinct academic discipline in recent decades, the field has tended to become side-lined in a number of debates which traditionally have been of major concern to business and economic historians. The paper discusses this issue by focusing on one of the major fields of research among economic historians and social scientists in recent years, namely the history of economic globalisation, and specifically the spectacular growth in international trade characterising the process. The history of economic globalisation and the causes of international trade growth has been a flourishing field of research in recent years, but business historians have not managed to make their mark on the major debates. We argue that one way of altering this situation would be to reinvigorate the old established link between business history and maritime history. We present two case studies showing how maritime firms played essential roles in putting in place vital organisational, technological and institutional preconditions for international trade growth. On this basis we argue that business historians of maritime firms are uniquely placed to understand the inner workings of the economic globalisation process and provide explanatory content to the macro oriented analysis dominating the existing literature.

Keywords: economic globalisation, international shipping, trade, car transport, pure car carriers, chemicals, parcel tankers,

#### Introduction

Recent reviewers of the current state and future direction of business history have complained that, despite the growth of business history as a distinct academic discipline, the field has tended to become side-lined in a number of debates which traditionally have been of major concern to economic historians. When the *Oxford* 

Handbook of Business History was launched in 2007, one of the main reasons for publishing the book was the need to 'liberate' a research field that 'is often overlooked'. In several of the book's chapters, this perceived side-lining of business historians was noted. Similar complaints have also been made elsewhere. In 2006, Geoffrey Jones and Tarun Khanna posed the need to bring 'history [back] into international business' since, [..] systematic investigation of historical evidence has disappeared from the research agenda of most IB scholars'. In their editorial for the 2011 spring issue of Business History Review, Geoffrey Jones and his Harvard colleague Walter Friedman similarly noted how, 'although entrepreneurship is an area in which business historians have made important contributions, [..] most of the recent conceptual work has been done by economist and management scholars.' The purpose of this article is to analyse this perceived absence of business history from the major general debates on-going within the social sciences and among economic historians, to discuss some of the reasons for this absence and how it can be resolved.

In dealing with these issues we take as our point of departure the history of economic globalisation. We are specifically concerned with the spectacular growth in international trade characteristic of the last two centuries and how business historians can contribute to a better understanding of this process. The history of economic globalisation has been a flourishing field of research among economic historians and social scientists in recent years, but business historians have not managed to make their mark in the major debates. As noted by Friedman and Jones in their 2011 editorial, 'business historians have dominated the efforts to show that there is nothing new about the globalization of firms [but], *in recent years business historians have often been fringe players in the study of globalization*, while political historians, economists, sociologists and political scientists have taken it forward in exiting ways.' <sup>5</sup> Even among

general economic historians, the role of firms in the globalization process has been largely ignored. This situation is regrettable, since, we will argue, business historians are uniquely placed to understand the inner workings of the globalisation process.

Although the ebb and flow of the economic globalisation process and its main determinants may perhaps be most effectively derived from macro level analysis, business history can provide an important and necessary supplement.

To succeed in this task, however, business historians need to be more able and willing to shuttle between various levels of analysis. The micro and meso analyses conducted at the firm and /or at the industry level need to be informed by existing knowledge developed at the macro level, and they need to be developed in a way that makes it possible to supplement and challenge existing explanations derived from macro level analysis. In a 1983 special issue of Business History Review, British economic historian Leslie Hannah complained how British business history had been too focused on singular company histories while 'systematic integrative work [..] dealing with wider themes, ... [had] been halting'. This claim is to a large extent still valid. There is still a need to insist on the importance of including business firms when analysing larger processes of economic change, and at the same time to stimulate business historians to relate their studies of business enterprises to such larger processes.

Understanding economic globalisation and the historic development of international trade also requires increased focus on sectors of the economy that have attracted only limited attention from business historians in recent decades. One of the most obvious and promising fields of research in this respect, we argue, is the transport sector, and particularly maritime transport. It is well recognised that seaborne transport was a fundamental feature in the growth of the international economy during the

nineteenth and twentieth century. In spite of this fact, and of the early intellectual linkages between maritime and business history – personified by professor Francis Hyde, the renowned maritime historian and founder of the journal *Business History* –, historians concerned with the issue of globalisation have not been very interested in maritime enterprises. Business histories of shipping firms abound, but few have made any explicit references to the general debates about globalisation and the role of shipping firms in cross-border economic integration. We are confident, however, that much is to be gained by realigning maritime history and research on globalisation. By studying the operations of shipping firms we are provided with a privileged access to the workplace where important physical aspects of economic globalisation was organised.

The article starts with a brief review of the existing literature on economic globalisation, focusing on what has been written on international trade growth and the worldwide integration of markets for goods. We subsequently present the case for a revived relationship between business and maritime historians, and why it may provide a promising avenue for improved understanding of nineteenth and twentieth century trade growth. The second section of the article presents case studies of two enterprises involved in innovation of maritime transport – the Norwegian shipping firms Ugland and Odfjell, operating within the car carrying and chemical trade respectively. The business operations of these shipowners show how even small firms situated in the outskirts of Northern Europe participated in creating the necessary preconditions for increased overseas trade and globalisation.

## Business history, maritime history and economic globalisation

Globalisation as a phenomenon seriously caught the interest of social scientists and

historians from the mid-1990s onwards. Since then a plethora of work has appeared, pointing in many different directions. Historical research on the economic aspect of the globalisation process has centred on the questions of when it actually began and to what extent the globalisation of the post-World War II period is to be regarded as something historically new. This body of work has considerably improved our understanding of how economic globalisation has evolved historically. It has pointed out important historical precedents of the contemporary globalisation process, and informed current debates on the extent, causes and consequences of increased international economic integration. It has also shown how globalisation is not an inevitable process, but relies both on technological preconditions and on the political will to pursue a more open and integrated economic society.

The bulk of this research, however, has not been conducted by mainstream historians. <sup>10</sup> Methodologically it has been characterised by quantitative analysis of large data sets, focusing on trends in the globalisation experience that can be gauged and analysed by statistical measures. <sup>11</sup> Explanations typically rest on some form of simplified model and are evaluated on the basis of the data at hand. In terms of understanding growth (or decline) in international trade, for example, the standard framework suggests that the level of international trade at any given time is, simply put, decided by the cost of moving goods between markets. These trade costs are of two major types: costs due to transport and costs due to politically enforced trade barriers. To explain trade growth on this basis, one only has to look at the parallel movements in the price of transport and the politically induced 'price' of imports. In periods when the price of transport falls more than tariffs and other politically induced trade barriers, technological change 'explains' most of the observed trade growth. In periods where tariff levels show the fastest and most substantial decrease, politics is regarded as the

most important explanation. The argument presented by Ronald Findlay and Kevin O'Rourke in their acclaimed study of the history of international trade, *Power and plenty*, is characteristic of this type of reasoning:

If we have dwelt at length on the political influences on international commodity market integration following the end of World War II, this is because these were the dominant influences shaping post-1945 patterns of integration and disintegration worldwide. This is the major distinction between the globalizations of the late nineteenth and late twentieth centuries: as we have seen, the former was overwhelmingly technological in origin, with falling transportation costs driving commodity markets closer together, despite the best efforts of many politicians to keep them apart by imposing countervailing tariffs. The latter was much more political in origin, and involved artificial trade barriers which had arisen as a result of two world wars and the Great depression being gradually dismantled. For despite the revolutionary technological advances of the period, the cost of transporting goods across the oceans of the world fell in real terms surprisingly little.'12

Although this type of analysis offers important insights, its logical rigor comes at the cost of oversimplification. It may also lead to biased conclusions. Although the cost of trade will ultimately decide whether trade in a given product makes economic sense, price reductions result from complex organisational, technological and institutional preconditions that cannot simply be presumed. In addition, expanding trade relies on a number of factors that do not necessarily affect the cost of trade, as reflected in freight rates. Existing studies of international trade growth and globalisation tend to overlook these issues. Often, this neglect is deliberate. In their study of economic globalisation in a historical perspective Michael Bordo and his colleagues openly admit that they 'exclude much that [..] matters', including such aspects as 'the transmission of technology'. The reason is that they 'simply think that, as economists, we are better equipped to resolve the other issues first'. <sup>13</sup> For business historians, the situation is different. It is precisely by putting these neglected preconditions for international trade growth at centre stage that business historians can make their most important contribution to the globalisation debate. They can do so by investigating the various

actors, firms and institutions involved in building the preconditions for trade, exploring how they went about developing their business, what challenges they faced and how these challenges were confronted. This will provide a necessary supplement to the economists' analysis and may also prepare the ground for essential revisions of existing interpretations.

To some extent, this work has already started. As Geoffrey Jones recently noted, recent studies made by business historians have 'highlighted the importance of entrepreneurs and firms, rather than markets and technologies, in the history of globalisation [and] shown that business enterprises have not simply responded to global markets, but have often created them.' <sup>14</sup> In this way business historians have already provided valuable insights into the history of economic globalisation. But this has mostly happened indirectly. The business historical literature related to globalisation still remains quite firm-specific and explicit links between the strategic and commercial development of a given firm and globalisation are seldom made. It is also evident, as Jones admits, that 'much of the research has taken the nation state as the starting point', and primarily analysed the development of firms within a 'national framework'. <sup>15</sup> Therefore, while business historians have analysed many aspects relevant to the understanding of the globalisation process, they have not managed to make an impact on the on-going debates about globalisation.

This situation is regrettable. As indicated above we believe that a possible way of improvement would be to reinvigorate the old established link between business history and maritime history. By its very nature, maritime history transcends the nation-specific approach dominating much existing business historical research: 'Maritime history is international by nature and global by coverage,' writes the renowned maritime historian Gelina Harlaftis; 'it can hardly be written without crossing borders and seas,

without dealing constantly with maritime links between different continents, economies and cultures. Studying maritime firms involved in transporting goods across the globe simply necessitates a transnational rather than a nation-centred approach. Moreover, studying the operations of shipping firms provides a unique perspective from which to examine how fundamental preconditions for the economic globalisation process were actually put in place. More than 90 per cent of the volume of international trade is still transported by ships, according to the International Maritime Organization (IMO). <sup>17</sup> In order to understand the inner workings of international trade growth – or, to cite Leslie Hannah, its 'microeconomic roost' – we believe a good place to start would be to study the firms owning, operating and developing these ships. <sup>18</sup>

How has the maritime sector effected the growth in trade during the second half of the twentieth century? To investigate this question the existing literature has focused on developments in the cost of seaborne transport and whether these costs have declined or increased in real terms. The general conclusion has been that the developments in the shipping industry were not important factors in explaining international trade growth during this period, since ocean freights apparently did not decline much in real terms. <sup>19</sup> While this conclusion is in itself questionable the main point to be made here is simply that the role of the shipping industry in the growth of international trade cannot be evaluated on the basis of price developments alone. <sup>20</sup> As already noted, price developments rest on a number of preconditions that need to be analysed and understood. Moreover, qualitative preconditions that do not necessarily affect the cost of trade also need to be investigated and explained. Between 1960 and 1990 alone, the volume of world trade carried by ships increased six-fold. <sup>21</sup> Irrespective of any price development, this massive trade growth could not have been accomplished without groundbreaking technological, organisational and institutional transformations in the

existing transport system. The total volume of shipping room had to be drastically enlarged. For some products, completely new types of ships had to be envisaged and developed. In addition to actual shipping room, land based facilities had to be improved to secure the efficient operation of the new and enlarged ships. This implied the construction of larger and deeper ports, the building of berths with loading and unloading facilities, the construction of specialised onshore storage installations and the development of efficient land based transport solutions capable of serving the new ports at a pace and a scale congruent with the capacity of the new ships. In addition, institutional changes such as the increasing use of flags of convenience were introduced to cut costs. New arrangements for financing the building of increasingly large, increasingly sophisticated (and hence increasingly expensive) vessels also had to be developed. Finally, the development also rested on ground-breaking innovations in the organisation of shipping companies. The traditional, large, integrated shipping firms increasingly sought to outsource several of the operations that had traditionally been a natural part of their day to day activities, eventually causing a 'decomposition of the value chain' within the shipping industry as a whole.<sup>22</sup>

None of these transformations happened by themselves. Rather, they were the result of deliberate commercial strategies implemented by actual businesses seeking to gain an economic advantage. Shipping firms and shipping entrepreneurs often stood at the centre of these processes. They took the initiative to build new and larger ships and they envisaged and developed new transport technologies that enabled more efficient transport of both familiar and new products. They were also often responsible for the numerous organisational innovations and institutional changes which built the foundations for increased international trade. Finally, they often played an active role in linking the various producers, transporters, financiers, shipbuilders and costumers in

different countries who had to be coordinated in order for the seaborne carrying capacity to expand as fast as it did and for the new, drastically enlarged transport system to function efficiently.

A historical explanation of economic globalisation should include analysis and narratives of why and how these commercial strategies were developed and executed. In solving this task, business historians are uniquely placed to offer important and new insights. Two examples – one from the history of the trade in cars and large machinery, another from the trade in chemical products – may serve as an illustration of the possible contributions from this kind of business history.

### Facilitating international trade: The case of cars and chemicals

From the mid-1950s to the mid-1990s international trade in large machinery, transport equipment and cars increased substantially. The value of total car exports increased more than hundredfold. From being a negligible part of international trade, within forty years cars became the fourth largest export item in the world. Machinery and transport equipment saw a similar growth, and by 1995 this category had become the largest export item in world trade in terms of value. <sup>23</sup> In volume terms the expansion was also considerable. As an example, the total number of cars exported passed two million in 1960. By 1995 the annual figure had risen to nineteen million, and ten years later it exceeded twenty-seven million. <sup>24</sup> About half of these cars were sent overseas. The volume of large machinery and transport equipment carried over the oceans grew at an equal rate.

The growth of trade in cars and heavy machinery, intensifying from the 1970s onwards, was a typical reflection of the accelerated globalisation process characterising

the last quarter of the twentieth century, or the 're-globalization' of the world economy as it has been termed.<sup>25</sup> A deeper and detailed understanding of how the growth of this trade came about would therefore significantly improve our understanding of globalisation in general.

Much has been written about the growth of the international car manufacturing industry and a wealth of data has been gathered on the fluctuating growth pattern, the scale, the geographical shifts and the economic consequences of the international car trade. <sup>26</sup> But very little work has been done on the preconditions for the growth of car export and the fundamental role played by maritime transport in creating and sustaining it. Throughout the period covered here, about half of the world's total car export was transported by sea. The fastest growing car exporter in the world for most of the period, Japan, was fully reliant on seaborne means of transport. Japanese car exporters could simply not have reached the scale they did so quickly or competed so successfully with other countries' car manufacturers had it not been for parallel, groundbreaking technological and organisational improvements in the seaborne transport of cars. European exports of cars across the North Atlantic to North America also grew substantially from the 1960s onwards, first dominated by Volkswagen and later joined by producers such as Swedish Volvo and Italian Fiat. From the 1970s onwards US overseas exports also started to gain serious momentum. To understand the increasing growth in international car trade – and hence globalisation – we need to explore how the preconditions for this trade were put in place. How was the massive trade in cars made possible? Which were the firms involved in organising the car trade? What motivated their participation and what capabilities and commercial strategies did they draw on to be able to expand and operate their fleet of ocean going car carriers as fast and efficiently as they did?

When the car trade started to expand seriously in the early 1960s, existing ships were not able to transport cars efficiently and safely across long overseas distances, and ports had not been constructed to handle the rapidly growing number of vehicles passing through their facilities. Competence among shipowners and shipbrokers for handling cars was negligible. Before 1950, they had typically been transported unassembled, in crates, and carried by conventional liners. For the car trade to expand as fast as it did during the second half of the twentieth century a series of innovations in seaborne car carrying was necessary. During this process, firms of various nationalities and operating at various levels of the value chain were engaged in developing new and innovative ship designs and in solving the numerous logistical and other challenges that impeded efficient and safe overseas transport of cars. Shipowners often stood at the centre of these processes, weaving a transnational web of car manufacturers, car importers, shipyards, handling agents, port authorities and shipbrokers that had to pull together in order for the expansion of the car trade to function smoothly and efficiently.

One example is the expansion in the exports of Italian Fiats from the early 1970s onwards. As already noted, during the 1960s the West German Volkswagen group had dominated world trade in cars. In 1965, the company accounted for almost half of the world's total car exports and about two thirds of the entire European exports to the North American market. Fiat only had a small share of the American market. In 1966, a total of 10 000 cars were exported to the US. In addition it exported about the same number of cars and tractors to the Australian markets. In the late 1960s the company sought further expansion in overseas markets, of which the American was among the most important. To achieve this end a series of complicated transport challenges had to be overcome.

Traditionally, conventional liners had shipped the limited export of Fiat cars and

tractors. As the company sought to expand its sales overseas, other transport solutions had to be envisaged. In the autumn of 1968, therefore, negotiations started with the Norwegian shipowner Andreas Ugland.<sup>28</sup> The shipping company Ugland had been established in the small town of Grimstad in southern Norway in 1930. By the mid-1960s, the company, now governed by the two sons of the initial founder, had developed to become Norway's third largest operator of bulk carriers and the largest in the ore trade.<sup>29</sup> More or less accidentally, the company gradually became involved in car transport through time charter arrangements with the Swedish company Wallenius. Conventional bulk carriers were rebuilt to handle a combined cargo of heavy bulk products, containers and cars that were typically shipped from Europe (pig iron and cars) to the US east coast and further to Japan before returning (with Japanese cars) to Europe. This new car carrying business was organised and operated more or less exclusively by one of the Ugland sons, Andreas, who had been educated as a naval engineer with a special interest in efficient ship design. After having operated the combined car and bulk/carriers for some time he gradually came to the conclusion that the scope for improvements in both cargo handling and efficiency was substantial. He also started contemplating the possibilities for building ships specifically designed to carry cars. As he wrote in a retrospective, personal memo, 'the conclusions we soon drew was that ships transporting cars should be built specifically for this light cargo. Thereby we could build a hull that was much sharper, with less use of bunkers, better transport systems on-board and a better stability to transport cars than what was the case with bulk carriers.'30

As a consequence of these considerations, Andreas Ugland established a separate company to explore more fully the opportunities in the car trade. In July 1968 an order was placed at the German yard AG Blom and Voss for the building of three so-

called pure car carriers (PCC). These were ships specifically designed to handle cars, or as formulated by the shipping consultants at Drewry: 'a fixed deck car transporter designed solely for the carrying of passenger cars'.<sup>31</sup>

When the ships were ordered, Ugland had no occupation for them. Demand for overseas car transport was increasing steadily, but no exporter had seen the possibilities in specialised car carriers. Hence, parallel to building the ships Ugland started issuing letters to many of the largest car exporters in Europe offering the services of the new ships. One of the companies that responded was Fiat, and already by September 1968 meetings were held between Andreas Ugland and Cecare Manera and Franco Maspoli from Fiat. Two months later the two companies signed a three year contract whereby Ugland was to take full responsibility for Fiat's car exports to the US and Australia.

Before the export could get going, however, a number of different problems had to be solved. The first was related to the construction of the ships that had been ordered. Ocean-going PCCs of the size Ugland wanted to build was unprecedented and many of the technical solutions had to be developed from scratch. <sup>32</sup> Ugland and some of his naval engineers worked closely together with the yard to construct a ship that could operate efficiently and at the same time decrease the amount of damage made to the cars. Two and a half years were spent before the first ship – *Laurita* – was finally launched and handed over to Ugland.

To make sure that the expansion of the Fiat exports could proceed smoothly, a suitable ship was only one part of the solution. An appropriate harbour for the loading of the cars also had to be found, requiring lengthy negotiations between Ugland, Fiat and a number of Italian ports. After some time, the decision was finally set on the port of Savona. Subsequently, a deal had to be made between Ugland and the company responsible for landward transportation of Fiat cars to the port. In the case of Savona,

Fiat used the Italian agent Züst Ambrosetti, so Ugland and Ambrosetti had to negotiate a deal capable of securing a coordinated delivery of cars to the harbour. In securing this, the two companies ended up co-operating on the establishment of a specially designed, twelve story car-parking house situated in the harbour. The major objective was to further increase the speed with which the ships could be loaded, to reduce the number of damages and also minimise the possibilities for theft. Finally, on the other side of the Atlantic, negotiations had to be made between Ugland, the American importer of Fiats - the company Fiat Roosevelt - and various ports on the US West and East coast, to find the most suitable harbours for the delivery of the cars. Ugland himself visited a series of ports on both coasts, and in concert with the leading management of the importing company decided on the central ports of call.

When the first shipload of Fiats departed from Savona in January 1970, trade in Italian cars was taken to a new level. During the 1970s Italian car exports continued to rise, and in contrast to major car exporters such as the British and the Germans, who increasingly were outperformed by a surging Japanese car industry, the Italians largely managed to retain their relative market position. While the total number of Italian cars exported continued to rise, German and British exports declined also in absolute terms. By 1975 the number of German cars being exported was just slightly larger than it had been ten years earlier, while the number of Italian cars being exported was twice as large. <sup>33</sup>

The deals made between Ugland, Fiat and the other partners involved in organizing the Fiat shipments certainly do not by themselves explain the positive Italian experience. German, British and Swedish exporters also increasingly started using specialised PCCs to carry their cars. In fact, already by 1977 the car carrying capacity of the world's PCC fleet had passed the capacity of the traditional car/bulk carriers.<sup>34</sup> But

the application of new and more efficient car carrying technology, alongside the improvements in onshore cargo handling, were important and necessary preconditions for the development taking place. The case illustrates how a rather small shipping firm was able to play a vital role in solving the technological and organisational problems involved. It did so by developing and introducing new and innovative ship technology, organising the rebuilding of existing harbour facilities, building networks with producers and sellers of cars as well as with handling agents and landward transportation companies. This clearly demonstrates the importance of firms in understanding the inner workings of the globalisation process. Specifically it shows how trade growth and globalisation intimately relied on the construction of complex transnational networks of economic agents that all played an active role in the development that took place.

International trade in cars and heavy machinery experienced a spectacular growth during the second half of the twentieth century. One of the few products that grew at a similar pace was chemicals. In 1955, world trade in chemical products was rather limited. In value terms the trade amounted to less than five billion dollars, or just above five per cent of the total value of world merchandise exports. Forty years later the value of the trade had reached 467 billion dollars, and its' share of total merchandise exports had reached almost ten per cent. As a consequence, chemicals had become the third most traded product in the world in value terms.<sup>35</sup>

Trade in chemicals included a variety of products, including organic products such as ethylene, propylene, butadiene (the olefins), benzene, toluene and xylene (the aromatics), inorganic products such as phosphoric acid and caustic soda, vegetable oils and molasses.<sup>36</sup> A growing use of plastics, the expansion of the aluminium and fertilizer industries and a growing market for vegetable oils and molasses all contributed

to the growth of international trade in these products. In fact, many of the products that now entered the international market had never been traded overseas before. One reason was simply that many of them were new. Another reason was that they were difficult to transport efficiently across long distances. The volumes traded were often small and the different products needed to be transported in segregated tanks. Efficient bulk carrying of such products thus required the development of ships capable of transporting a variety of products in separated tanks without any risk of contamination or spills. Many of the chemicals now entering the international market were also toxic, they could explode as well as pollute and taint both crew and marine life. In addition some products, such as phosphoric and sulphuric acid and caustic soda, are corrosive to metals. Seaborne trade in these products thus required the construction of sophisticated tanks that were either coated with rubber or acid proof paints, or even better, made of stainless steel. In other words, for the trade in chemicals to get going a series of complex challenges relating to the efficient and safe overseas transport of these products had to be overcome. By the beginning of the 1950s very few of these problems had been solved and trade was miniscule. Forty years later chemicals had become among the largest products in world trade.

To explain this development, reference to changes in the transportation or other trade costs is obviously not sufficient. Rather, to understand how the massive growth in chemical trade was possible we need to explore the technological, institutional and organisational innovations preceding the growth and how these established the preconditions for an increasingly large international market for chemical products.

These innovations and entrepreneurial activities were largely handled by a small number of shipping companies dedicated to exploring the commercial opportunities in increased overseas transport of chemicals. One of the main participants in this

development was the medium sized Norwegian company Odfjell.<sup>37</sup> By the mid-1950s the firm, established in 1915 and based in the town of Bergen on the west coast, operated a fleet consisting primarily of general cargo carriers, as well as some specialised product tankers. During the next decade, however, Odfjell took a leading role in the development of the international chemical trade and grew to become one of the leading shipping firms within it.

As already indicated, the growth of the international chemical trade relied on the development of ships that were capable of transporting a variety of products in separated tanks without any risk of contamination or spills. So-called parcel tankers had been developed to this end, capable of carrying a large variety of chemicals in bulk. Once the first of such ships had been launched in the late 1940s – pioneered largely by giant US chemical companies such as Union Carbide – they soon became what Murphy and Tenold have described as 'the favoured vessel for the carriage of a wide range of chemicals'. The obvious reason was that 'this kind of transport gave substantial cost reductions relative to shipments in individual containers on conventional ships.' Put differently, the price of chemical transport decreased and therefore stimulated trade.

Price reductions made possible by technological improvement were, however, not the only trade stimulating effect of the parcel tanker. Increasing technological sophistication in the construction of these ships throughout the 1960s and 1970s meant that products which had been excluded from intercontinental trade for safety or other reasons now became tradable. By that stage, the technological development processes were largely in the hands of a few shipping companies. When Odfjell entered the chemical trade, the main target was to develop ships that could secure efficient and safe transport solutions for the widest possible range of products. Under slogans such as 'for anything liquid', Odfjell sought solutions that would maximise the flexibility of their

ships by making them able to carry everything from the most difficult chemicals, such as sulphuric and phosphoric acid, to 'wine, milk and honey if that was available.' This strategy required innovative thinking in terms of ship design, and in 1959 the company ordered the first chemical tanker built from scratch with stainless steel tanks. Only a year later, two more ships of the same type were contracted for. As in the case of Ugland's first pure car carriers, the ordering of these stainless steel ships resulted primarily from the technological curiosity and inventiveness of the shipowner family. There was no prior demand for stainless steel ships. In fact, neither fellow shipowners nor the chemical producers saw the economic potential in these vessels. As J. O. Odfjell later recalled:

I had the idea of building a vessel with stainless steel tanks. Everybody I talked to found this idea absurd. The vessel would be too expensive to give any returns. No yard had the necessary experience [...] I also discussed the matter with several chemical companies. They thought the idea was utopian.<sup>40</sup>

The company still went ahead and soon found that these ships had several advantages. Firstly, the types of cargoes that could be safely transported increased considerably. Secondly, since the stainless steel tanks were much easier to clean than conventional tanks, the time spent in the port was reduced and utilisation rates increased. Hence, the cost of carrying less sophisticated and more conventional chemicals was further reduced.

It was not only through technological innovations that maritime business firms like Odfjell advanced the growth of the chemical trade. The company also contributed to reorganising the trade by the development of specialised, in-house brokering competence. This tied the producers and users of chemical products closer together and further increased the efficiency and reliability with which the trade could be handled. Finally, Odfjell and other shipping companies played a key role in developing land-

based facilities that further increased both the profitability and safety of chemical transport, in the same manner as in the transport of cars. As the trade grew, storage capacity for chemical products became 'a bottleneck in the distribution' according to the Odfjell owners. <sup>41</sup> Increasingly, therefore, the efficient operation of overseas chemical transport required the development of specially designed port terminals capable of storing and redistributing potentially dangerous chemical cargoes. Logistical problems were particularly pertinent in ports along the South American and African coast, but in European and North American ports there was also an urgent need for efficient and safe terminals. To alleviate the problems and further increase the efficiency of the shipping operations Odfjell decided to invest heavily in the construction of onshore terminal facilities in selected ports. The first terminal was opened in Buenos Aires in 1969. Later terminals were established and operated, either from scratch or through various forms of partnership in Marseilles, Valleyfield (near Montreal), Hamburg and Santos.

Without innovations such as the parcel tanker, the stainless steel tanks, specialised brokering as well as onshore facilities in the form of terminals, the booming trade in dangerous chemical substances experienced during the second half of the twentieth century would have developed much more slowly, or perhaps not at all. These innovations both made overseas transport of chemicals more cost efficient, and enabled trade in substances that would otherwise have been debarred from international trade. Shipping companies played a vital role in these innovative processes, putting in place the preconditions for increased international trade and ultimately for the globalisation of the market for chemical products. As Murphy and Tenold conclude in their study of the growth of the international chemical trade: 'The technological innovations and transport cost reductions associated with parcel tankers are important explanations for the growth of the international trade in chemicals.'

#### 'Real world' economic globalisation

Writing on the relationship between business history and economic history in a 1966 issue of the *Journal of Economic History*, Harold F. Williamson complained that the two strands of research had drifted too far apart. This separation, he argued, had effected negatively both the work of business historians and of economic historians. One of the major problems noted was how a lack of interest in the operations of firms had caused economic history to loose sight of the 'real' economy and instead drift into abstractions. To alleviate this situation, a new dialogue between the two fields was called for. As he wrote in his concluding remarks: 'Economic historians [...] must almost of necessity draw on the work of business historians if they are to bridge the gap between theoretical abstractions and the real world'.<sup>43</sup>

In this article we have discussed the continued absence of a business historical perspective from major debates within economic history, economics and other social sciences. Specifically, we have focused on the issue of modern economic globalisation, and how the burgeoning field of research on this topic has largely failed to include the role and importance of firms and entrepreneurs in their analysis. We have argued why this is problematic and also suggested some possible steps that could help improve the situation.

The process of world economic integration is, we believe, too important and too complex to be left to economists and macroeconomic historians alone. To understand the inner workings of the globalisation process more micro oriented studies are necessary and business historians are uniquely placed to provide new insights in this field. We certainly do not think that a merger of business history and maritime history, as suggested in this article, will be sufficient to fill the gap. What we firmly believe, however, is that a business historical perspective is badly needed in the ongoing debates

on the origins, causes, extent and effects of globalisation. Business historians could provide flesh and bones to the important, yet often static and too simplified, explanatory models dominating the present research agenda, thereby bringing the study of globalisation nearer to 'the real world'.

To achieve this important end, business historians have to engage more eagerly in research addressing larger economic processes and be more willing to shuttle between various levels of abstraction. The detailed studies of business firms and industries have to be integrated with broader reflections of macro economic processes, and globalisation is one such important processes. Business histories of maritime firms and industries are eminently suited to achieve such an ambition. The cases presented in this article are only brief sketches of very sophisticated business processes. All the same they support the fundamental point made in favour of our emerging discipline by T.S Ashton in his editorial to the very first issue of *Business History*. His formula, explaining the need for a business history approach to comprehensive economic issues like globalisation, still seems valid: 'For it is in the individual firm, rather than in wider organisations, that we can observe the operation of economic forces at first hand.' 44

\_

Jones and Zeitlin, "Introduction", 1.

A typical example is Mathias Kipping and Behlül Üsdiken's chapter on business history and management studies, where they noticed how 'the study of management and organisation has in rather abrupt fashion turned away from history.' Kipping and Üsdiken, "Business history and Management", 99.

Jones and Khanna, "Bringing History (Back)", 453-4.

Friedman and Jones, "Business History", 3.

<sup>&</sup>lt;sup>5</sup> Ibid., 5 (my italics).

<sup>&</sup>lt;sup>6</sup> Hannah, "New Issues", 166.

As noted by Jan Art Scholte: 'Since the 1990s globalisation has become a major academic

growth industry'. Scholte, Globalization: A Critical Introduction, 51

- Bordo, Eichengreen and Irwin, "Is Globalization Today Different?" For the first debate see e.g. O'Rourke and Williamson, "Once More"; O'Rourke and Williamson, "Did Vasco da Gama Matter?"; O'Rourke and Williamson, *Globalization and History*; O'Rourke and Williamson, "When did Globalization begin?"; Rönnbäck, "Integration of Global Commodity Markets"; Frank, *ReOrient*; Wallerstein, *Capitalist Agriculture*; Wallerstein, *The Second Era*; Hopkins, *Globalization in World History*; Bayly, *The Birth*; Stearns, *Globalization in World History*. For the second debate, the classic contribution is Hirst and Thompson, *Globalization in Question*. See also Bordo, Eichengreen and Irwin, "Is Globalization Today Different?"; O'Rourke; "Europe and Globalization"; Baldwin and Martin, "Two Waves of Globalization"; Temin, "Globalization"; Sachs and Warner, "Economic Reform". A good historiography on globalization and history in general is provided by Lang, "Globalization and its History".
- See e.g James, Creation and Destruction; James, The End of Globalization.
- Indeed, much of the work cited above has been written by academics who would consider themselves economic historians. But the large majority of them have their degrees in economics; they work in economics departments and have their professional position in economics. Some of them also explicitly define themselves within a specific strand of economic history labelled the new comparative economic history that explicitly 'is motivated by current debates among academic economists and policymakers rather than following agendas set by historians'. Taylor, O'Rourke and Hatton, *New Comparative Economic History*, 2.
- See Jones, "Globalization"; Jones and Wadhwani, "Entrepenurial Theory".
- Findlay and O'Rourke, *Power and Plenty*, 501-2.
- Bordo, Taylor and Williamson, "Introduction", 3.
- Jones, "Globalization", 142.
- <sup>15</sup> Ibid., 162.
- Harlaftis, "Maritime History", 220.
- <sup>17</sup> IMO, "Shipping Facts and Figures", 7.
- <sup>18</sup> Hannah, "New Issues", 166-7.
- See e.g Hummels, "Transportation Costs"

- For a more elaborate discussion of these issues see Ekberg, Lange and Merok, "Building networks of Trade".
- Estimates are from Harlaftis, *Greek-Owned Shipping*, 250-2.
- Lorange, Shipping Strategy, 82.
- The second largest was Office and telecom equipment. All figures from GATT, cited in Grimwade, *International Trade*, 14.
- <sup>24</sup> Figures from Drewry, *Car-bulk Carriers*; Drewry, *Car carriers*.
- <sup>25</sup> Findlay and O'Rourke, *Power and Plenty*.
- A good overview is Vickery "Globalization in Automobile Industry".
- Steimler and Stavseth, *Car Transport by Sea*, 13.
- The following is largely based on Ekberg, "The Deep-Sea Car-Carrying Industry"; Nerheim and Gjerde, *Uglandrederiene*.
- Since Norway at this point operated one of the world's largest fleets of dry bulk carriers this implied that Ugland was in fact one of the world's largest operators of such ships, see Fon, *En stormakt i tørrbulk*.
- Cited in Ekberg, "The Deep-Sea Car-Carrying Industry", 266.
- Drewry. *Growth of Car-Carrying Fleet*, 10.
- It needs to be recognised that the idea of constructuing Pure Car Carriers was not completely new. Already in 1965 the shipowner Jan Erik Dyvi also a Norwegian had launched what is commonly regarded the world's first PCC, Dyvi Anglia. This ship was, however, rather small and operated exclusively in the short-sea market. By 1968 Dyvi had, however, launched another two ships both of which eventually entered the deep-sea service, carrying Volkswagen cars across the North Atlantic. The three ships launced by Ugland in the early 1970s wer, however, 'Larger and faster [..] than anything yet build'. Drewry. *Growth of Car-Carrying Fleet*, 13. See also Bakka, *Livsseilas*.
- Figures compiled from Drewry, *Growth of Car-Carrying Fleet*, Drewry, *Car-bulk Carriers*.
- Ekberg, "The Deep-Sea Car-Carrying Industry", 256.
- Figures from GATT, cited in Grimwade, *International Trade*, 14.
- Stopford, *Maritime Economics*, 473-5.

- Subsequent information on the development of the Odfjell company is largely based on Thowsen and Tenold, *Oddfjell*; Tenold, "Steaming Ahead"; Murphy and Tenold, "Strategies, market concentration and hegemony".
- Murphy and Tenold, "Strategies, market concentration and hegemony", 294.
- <sup>39</sup> Quote from J.O Odfjell, cited in Towsen and Tenold, *Oddfjell*, 307-8.
- Cited in Ibid., 308.
- <sup>41</sup> Ibid., 358.
- Murphy and Tenold, "Strategies, market concentration and hegemony", 306.
- Williamson, "Business History and Economic History", 417.
- Ashton, "Business History", 1.

#### References

- Ashton, T. S. "Business History." Business History 1, no. 1 (1958): 1-2.
- Bakka, Dag. Livsseilas i umerket farvann: Dyvi a/S: Hovedtrekk i rederiets historie. Oslo: Dyvi AS, 2007.
- Baldwin, Richard E., and Philippe Martin. "Two Waves of Globalization: Superficial Similarities, Fundamental Differences." *National Bureau of Economic Research Working Paper Series* No. 6904 (1999).
- Bayly, C. A. *The Birth of the Modern World, 1780-1914: Global Connections and Comparisons.* Malden, Mass.: Blackwell Pub., 2004.
- Bordo, Michael D., Barry Eichengreen, and Douglas A. Irwin. "Is Globalization Today Really Different Than Globalization a Hundred Years Ago?" In *NBER Working Paper*. Cambridge, MA: National Bureau of Economic Research, 1999.
- Bordo, Michael D., Alan M. Taylor, and Jeffrey G. Williamson. "Introduction." In *Globalization in Historical Perspective*. Chicago, Ill.: Chicago University Press, 2005.
- Drewry. Car Carriers: The Fast Lane of International Shipping. London: Drewry Shipping Consultants, 2006.
- ——. *Car-Bulk Carriers: Their Impact on the Freight Market*. London: Drewry Shipping Consultants 1971.
- ——. *The Growth of the Car-Carrying Fleet*. London: Drewry Shipping Consultants 1977.
- Ekberg, Espen. "The Growth of the Deep-Sea Car-Carrying Industry, 1960-2008." In *New Directions in Norwegian Maritime History* edited by Lewis R Fischer and Even Lange. St. John's: International Maritime Economic History Association, 2012: 253-79.
- Ekberg, Espen, Even Lange, and Eivind Merok. "Building the Networks of Trade:Perspectives on Twentieth Century Maritime History." In *The World's Key Industry: History and Economics of International Shipping*, edited by Gelina Harlaftis, Stig Tenold and Jesús M. Valdaliso. Basingstoke: Palgrave MacMillan, 2012: 88-105.
- Findlay, Ronald, and Kevin H. O'Rourke. *Power and Plenty: Trade, War, and the World Economy in the Second Millennium*. Princeton, N.J.: Princeton University Press, 2007.
- Fon, Anders Martin. "En stormakt i tørrbulk: En økonomisk-historisk analyse av norsk tørrbulkfart 1950-1973" ["A superpower in dry bulk. An economic-historic analysis of Norwegian dry bulk shipping, 1950-1973"]. Norges Handelshøyskole, 1995.
- Frank, Andre Gunder. *Reorient: Global Economy in the Asian Age.* Berkeley, Calif.: University of California Press, 1998.
- Friedman, Walter A., and Geoffrey Jones. "Business History: Time for Debate." *Business History Review* 85, no. 1 (2011): 1-8.
- Grimwade, Nigel. *International Trade: New Patterns of Trade, Production and Investment.* 2nd ed. London: Routledge, 2000.
- Hannah, Leslie. "New Issues in British Business History." *Business History Review* 57, no. 2 (1983): 165-74.
- Harlaftis, Gelina. A History of Greek-Owned Shipping. The Making of and International Tramp Fleet, 1830 to the Present Day. London: Routledge, 1996.

- ——. "Maritime History or the History of Thalassa." In *The New Ways of History*. *Developments in Historiography*, edited by Gelina Harlaftis, Nikos Karapidakis, Kostas Sbonias and Vaios Vaiopoulos. London: Tauris Academic Studies, 2010.
- Hirst, Paul Q., and Grahame Thompson. *Globalization in Question: The International Economy and the Possibilities of Governance*. Cambridge: Polity Press, 1996.
- Hopkins, A. G. *Globalization in World History: Edited by A.G. Hopkins*. New York: W.W. Norton, 2002.
- Hummels, David. "Transportation Costs and International Trade in the Second Era of Globalization." *Journal of Economic Perspectives* 21, no. 3 (Sum 2007): 131-54.
- IMO. "International Shipping Facts and Figures Information Resources on Trade, Safety, Security, Environment." London, 2012.
- James, Harold. *The Creation and Destruction of Value: The Globalization Cycle.* Cambridge, Mass: Harvard University Press, 2009.
- ——. The End of Globalization: Lessons from the Great Depression. Cambridge, Mass.: Harvard University Press, 2001.
- Jones, Geoffrey. "Globalization." In *The Oxford Handbook of Business History*, edited by Geoffrey Jones and Jonathan Zeitlin. Oxford: Oxford University Press, 2007.
- Jones, Geoffrey, and Tarun Khanna. "Bringing History (Back) into International Business." *Journal of International Business Studies* 37, no. 4 (2006): 453-68.
- Jones, Geoffrey, and R. Daniel Wadhwani. "Entrepenurial Theory and the History of Globalization." *Business and Economic History On-Line* 5 (2007).
- Jones, Geoffrey, and Jonathan Zeitlin. "Introduction." In *The Oxford Handbook of Business History*, edited by Geoffrey Jones and Jonathan Zeitlin. Oxford: Oxford University Press, 2007.
- Kipping, Mathias, and Behlül Üsdiken. "Business History and Management Studies." In *The Oxford Handbook of Business History*, edited by Geoffrey Jones and Jonathan Zeitlin. Oxford: Oxford University Press, 2008:96-119.
- Lang, Michael. "Globalization and Its History." *The Journal of Modern History* 78, no. 4 (2006): 899-931.
- Lorange, Peter. *Shipping Strategy: Innovating for Success*. New York: Cambridge University Press, 2009.
- Murphy, H., and S. Tenold. "Strategies, Market Concentration and Hegemony in Chemical Parcel Tanker Shipping, 1960-1985." *Business History* 50, no. 3 (2008): 291-309.
- Nerheim, Gunnar, and Kristin Øye Gjerde. *Uglandrederiene: Verdensvirksomhet Med Lokale Røtter*. Grimstad: Andreas K.L. og Johan Jørgen Ugland, 1996.
- O' Rourke, Kevin H., and Jeffrey G. Williamson. "Once More: When Did Globalization Begin?". *European Review of Economic History* 8, no. 01 (2004): 109-17.
- ——. "When Did Globalization Begin?". *European Review of Economic History* 6, no. 01 (2002): 23-50.
- O'Rourke, Kevin H. . "Europe and the Causes of Globalization, 1790 to 2000." In *Europe and Globalization*, edited by Henryk Kierzkowski. Geneva: Palgrave Macmillian, 2002.
- O'Rourke, Kevin H., and Jeffrey G. Williamson. "Did Vasco Da Gama Matter for European Markets?" *The Economic History Review* 62, no. 3 (2009): 655-84.
- ——. Globalization and History: The Evolution of a Nineteenth-Century Atlantic Economy. Cambridge, MA: MIT Press, 1999.
- Rönnbäck, Klas. "Integration of Global Commodity Markets in the Early Modern Era." European Review of Economic History 13, no. 01 (2009): 95-120.

- Sachs, Jeffrey D., and Andrew Warner. "Economic Reform and the Process of Global Integration." *Brookings Papers on Economic Activity* 26, no. 1995-1 (1995): 1-118.
- Scholte, Jan Aart. *Globalization: A Critical Introduction*. Basingstoke: Palgrave Macmillian, 2005.
- Stearns, Peter N. Globalization in World History. London: Routledge, 2010.
- Steimler, Svein-Gustav, and Sverre Stavseth. *Car Transport by Sea.* Bergen: NHH. Institute of shipping reseach, 1970.
- Stopford, Martin. Maritime Economics. London: Routledge, 2009.
- Taylor, Alan M., Kevin H. O'Rourke, and Timothy J. Hatton. *The New Comparative Economic History: Essays in Honor of Jeffrey G. Williamson*. Cambridge, Mass.: MIT Press, 2007.
- Temin, Peter. "Globalization." *Oxford Review of Economic Policy* 15, no. 4 (1999): 76-89.
- Tenold, Stig. "Steaming Ahead with Stainless Steel: Odfjells's Entry and Expansion in the Chemical Tanker Market, 1960-1974." *International Journal of Maritime History* XVIII, no. 1 (june 2006 2006): 179-98.
- Thowsen, Atle, and Stig Tenold. Odfjell. Bergen: Odfjell ASA, 2006.
- Vickery, Graham "Globalization in the Automobile Industry." Chapter 4 in *Globalization of Industry. Overview and Sector Reports*, edited by OECD. Paris: Organisation for Economic Co-operation and Development, 1996:153-205.
- Wallerstein, Immanuel. Capitalist Agriculture and the Origin of the European World-Economy in the Sixteenth Century. The Modern World-System. Vol. 1, New York: Academic Press, 1974.
- ——. The Second Era of Great Expansion of the Capitalist World-Economy, 1730-1840s. The Modern World-System. Vol. 3, New York: Academic Press, 1989.
- Williamson, Harold F. "Business History and Economic History." *The Journal of Economic History* XXVI, no. 4 (1966): 407-17.