

**WHERE CAN ENTREPRENEURIAL OPPORTUNITIES  
BE FOUND IN BULK SHIPPING?  
A CASE STUDY OF FINNISH INDUSTRIES' PREFERENCES IN SUPPLIER  
SELECTION**

**Jyväskylän yliopisto  
Kauppakorkeakoulu**

**Pro gradu -tutkielma**

**2018**

**Tekijä: Suutarla  
Oppiaine: Yrittäjyys  
Ohjaaja: P. Patja**



JYVÄSKYLÄN YLIOPISTO

## TIIVISTELMÄ

Tekijä Suutarla, Hanna	
Työn nimi Where can entrepreneurial opportunities be found in bulk shipping? A case study of Finnish industries' preferences in supplier selection	
Oppiaine Yrittäjyys	Työn laji Pro gradu -tutkielma
Aika (pvm.) 24.7.2018	Sivumäärä 80
<p>Tiivistelmä - Abstract</p> <p>Gradussani pyrin selvittämään, millaisia uusia liiketoimintamahdollisuuksia irtolastiin erikoistuneille varustamoille voitaisiin löytää. Työssäni sovellan yrittäjyyden tutkimuksen perusteeman, liiketoimintamahdollisuuden (entrepreneurial opportunity) käsitettä. Työni aluksi perehdyin liiketoimintamahdollisuuksien lähteisiin kirjallisuuden pohjalta (Cohen, Shane) sekä pyrin löytämään tutkimuksia merikuljetuksista yrittäjyyden aikakauslehdistä, joita löytyikin muutamia kreikkalaisista varustamoista.</p> <p>Suomeen liikennöivien irtolastivarustamoihin kohdistuvia vaatimuksia selvitin puolistrukturoiduin haastatteluin. Haastattelin yhteensä kahdeksaa henkilöä, jotka ovat joko lastinantajia, työskentelevät varustamossa tai ovat lastinvälitystoimessa (brokereita). Näitä haastatteluja tuen teoreettisella kehyksellä, joka toi rakennetta haastattelujen tekemiseen, niiden analysointiin ja tulosten verifiointiin. Haastattelujen teoreettisen kehyksen ydinkäsitteeksi valikoitui kuljetuskanavien suorituskyky (channel role performance), mikä onnistuneesti tuki tutkimusprosessia. Kun kirjallisuudessa esitettyjä kuljetuskanavan suorituskykyyn vaikuttavia tekijöitä verrattiin kirjallisuudesta esiin nostettuihin mahdollisuuksien lähteisiin, saatiin aikaiseksi matriisi. Tämä matriisi yhdistettiin haastatteluista tunnistettuihin vaatimuksiin, ja näin saatiin luotua katsaus liiketoimintamahdollisuuksien lähteistä, joihin perustui päivitetty liiketoimintamalli (Osterwald et al), joka esiteltiin lopuksi. Tässä mallissa ehdotettiin teollisuuden, Itämeren varustamoiden ja EU:n yhteistä hanketta, jossa luotaisiin Itämeren olosuhteisiin räätälöity jäälukitettu, pienikokoinen ja automatisoitu tyyppilaiva.</p> <p>Työn tärkein anti oli nostaa esiin, että merenkulkua tulisi tarkastella ennen kaikkea elinkeinona, eikä vain logistiikan osaprosessina. Tämä tarkastelukulma mahdollistaa merikuljetusten dynamiikan ymmärtämisen ja elinkeinon analysoinnin palveluliiketoimintona, jolloin sen liiketoimintamahdollisuuksista puhuminen on mielekästä. Merenkulun liiketoimintamahdollisuudet ovat tärkeitä paitsi teollisuudelle ja sen toimitusvarmuudelle myös laajemmin Suomen huoltovarmuudelle, ja niitä tulisikin edistää sekä tutkimuksen, että taloudellisen ohjauksen keinoin.</p>	
Asiasanat: Entrepreneurship, (sources of) entrepreneurial opportunities, shipping, ship owner, bulk shipping, cargo owner, 3 <sup>rd</sup> party logistics, channel role (performance)	
Säilytyspaikka Jyväskylän yliopiston kirjasto	

## Table of contents

Figures .....	5
Tables .....	6
1. The Background .....	7
1.1 The aim of the study: Finding entrepreneurial opportunities in bulk shipping .....	8
1.2 A short definition of the entrepreneurial opportunities.....	9
1.3 The Business Model Canvas - a tool to represent the opportunities.....	10
2. Shipping: “a fascinating business”, stretching back over 5000 years.....	13
2.1 Written sources for shipping .....	14
2.2 The shipping markets: The freight market and vessel market .....	16
2.2.1 Financial performance in shipping.....	20
2.2.2 Bulk shipping characteristics.....	21
2.3 Excluding some of the entrepreneurial activities of shipping - opportunism and piracy.....	22
3. The concept of Entrepreneurial Opportunities and THE sources of them .....	23
3.1 Entrepreneurial opportunities and Shane .....	24
3.1.1 The nature of entrepreneurial opportunities .....	26
3.1.2 Perception, opportunities and changes.....	28
3.1.3 Entrepreneurial process and opportunities.....	29
3.2 Sources of opportunities, according to Shane .....	29
3.3 Sources of opportunities: Volatility in shipping .....	30
3.4 Sources of opportunities, according to Cohen .....	31
3.5 Presenting the sources of opportunities as a matrix .....	32
4. Ongoing conversations: are there any articles about Entrepreneurial Shipping? .....	34
4.1 A systematic literature review of the entrepreneurial journals and shipping .....	35
4.1.1 The results of the literature review.....	36
4.2 Found in journals: Greek bulk shipping .....	37
4.2.1 Findings from the articles about Greek shipping.....	38
4.2.2 The business model of Greek shipping.....	40
5. Multiple case studies - interviews of the cargo owners.....	41
5.1 The used data - semi- structured interviews .....	43
5.2 Reliability and validity .....	44
5.3 Theory-driven interviews: The heuristics of choosing a suitable theoretical concept .....	46

5.3.1	The used supporting theoretical concept: Channel role.....	48
5.3.2	Where to move with the channel? .....	50
5.3.3	Channel role performance .....	51
5.3.4	Using the concept for setting the theoretical frame for interviews.....	53
6.	Industry preferences in supplier selection: the Results from interviews.....	54
6.1	Not too many players .....	57
6.2	The elements of channel role performance, according to the interviews.....	59
6.3	The business model, according to the interviews.....	61
7.	Building a new business model according to the opportunities and channel role performance .....	62
8.	Conclusions.....	66
9.	References.....	69
10.	Table of article searches .....	76
	Questions (Level 1) .....	79

## FIGURES

Figure 1 Routes of Academic-Practitioner Engagement (modified from; Hughes, Bence, Grisoni, O'Regan & Wornham, 2011, p.45) .....	15
Figure 2 Bulk ships' freight rates index 1947–2008 (modified from Stopford, 2009, p. 118) .....	17
Figure 3 Utilization rate and market value (5 years old vessels) of bulk carriers (figures captured from The Platou Report 2015, p. 20) .....	18
Figure 5 Vessel scrap value versus selling price (very large crude carriers (tankers)) (figure captured from Mantell, 2012) .....	19
Figure 6 The sources of opportunities matrix .....	33
Figure 7 An overview of purchasing strategies for all portfolio quadrants (figure captured from Caniels & Gelderman, 2005, p. 143) .....	47
Figure 8 Bulk shipping to and from Finland – the business model according to charterers' views .....	61

## TABLES

Table 1 The Business Model Canvas (Osterwalder et al., 2010) .....	12
Table 2 The opportunities matrix .....	27
Table 3 Sources of opportunities, according to Shane .....	30
Table 4 Sources of opportunities, by Cohen.....	32
Table 5 “Greek Shipping - Still Number One!”, May 27, 2016 (table captured from Clarksons Research, 2016).....	37
Table 6 Greek shipping on a Business Model Canvas .....	40
Table 7 A table of the interviews .....	43
Table 8 Channel role performance - the key components (column two* following: Andersson et al., 2011 p.108; Skarmas, 2008, p.27).....	52
Table 9 DATA SET 1: Contract length and the value of cargo - presented in connection with comments to the port facilities and charter rates .....	56
Table 10 The elements of role performance.....	59
Table 11 Bulk shipping to and from Finland - the business model according to charterers’ views .....	61
Table 12 An example opportunities matrix.....	63
Table 13 The new business model for bulk shipping in Baltic .....	65

## 1. THE BACKGROUND

In this master's thesis on entrepreneurship, opportunity plays the leading part. The aim of the study is to find entrepreneurial opportunities for shipping to and from Finland. It also aims to understand the cargo owners that have been interviewed for their preferences and understanding of bulk shipping. Before turning to the informants, the theoretical background of the opportunity is studied, as well as the ongoing conversation about entrepreneurship in shipping. The interviews are semi-structured and theory driven. The theoretical concept for the supporting interviews is that of "channel role" (Skarmeas et al., 2008; Kim, 2000) and channel role performance. Examples of the entrepreneurial opportunities are extracted from the theoretical work presented by combining the sources of opportunities with the channel role performance elements presented by the informants.

Since *opportunity* is the buzzword for the thesis, it should be said that it had to be a series of opportunities which has driven someone with a MA in theoretical philosophy to work for shipping for 15 years and to start writing a master thesis again, this time on entrepreneurship. But seeing unexpected opportunities in shipping is possible. Furthermore, combining entrepreneurship (or why not *intrapreneurship* within the existing companies) with shipping is something which should be done by more people. For understanding why the entrepreneurial opportunities in shipping are important in even the most general premises, it is worth mentioning that some 90% of Finnish exports and over 70% of imports are coming and going on keel (Suomen Varustamot Ry, 2015). Shipping, as a part of logistics, is so important in Finland that there is a saying: "Finland is an island". In praxis this is worded by National Emergency Supply Agency (Suomen Huoltovarmuuskeskus, 2018) when they say that, for Finland, there is no realistic replacement available for waterborne logistics.

But, for understanding opportunities in shipping, this service industry should be seen not only as a part of logistics but also as "a key sector of the economy" in its own right, as stated by EU transport legislation scholar Rosa Greaving (2018). In entrepreneurship the part of the economy which is mostly covered by entrepreneurship's domain is the part formed by SMEs and family-owned companies. Most of the ship-owning companies are small, privately owned companies with less than five vessels. According to Stopford (2009, p. 282) in shipping business in the year 2004 there were 32 companies owning over 100

vessels, 256 companies owning 10 to 19 vessels and over 4 000 actors owning less than five vessels. The list of the family-owned companies covers both most of the small companies and most of the biggest ones as well. Also in Finland, of the cargo shipowners (who account for 13 of the 24 members of the Finnish Shipping Owners Association), over half are reclaiming being family-run companies according to their webpages.

Within this paper, shipping is seen as a service industry, a relevant sector of the economy capable of harvesting opportunities, and not just seen as part of outsourced logistics. It is also stated that entrepreneurship as a discipline can fruitfully be combined with shipping and ship owning and operating.

## **1.1 The aim of the study: Finding entrepreneurial opportunities in bulk shipping**

The aim of this thesis is to analyse if there are new entrepreneurial opportunities available for the shipping industry, either now or in the foreseeable future. For gaining understanding of this very complex issue, it has been addressed by three sub-questions. Firstly, what are the expectations or requirements for shipowners / ship operators that are set by the customer - the charterer? This information is gathered by theory-based interviews of such persons. Secondly, what the sources of entrepreneurial opportunities? This sub-question is covered by a literature review within entrepreneurial discourse. And thirdly, if the preferences of the charterers, the cargo owners, are combined with the theoretical sources of opportunities, can some entrepreneurial opportunities be seen or not? To conclude this work, an example of an entrepreneurial opportunity, presented as business model, is introduced to open up the potentiality available via such work.

At very beginning of this work you will find some of the technical terms and concepts opened up, as well as those of merchant shipping in general. Then, academic studies about bulk shipping are analysed. Since most of the coverage falls within Greek shipping, it is analysed in a more detailed manner. The following methodological parts open up the methods needed for the theory-based interviews. After the chapter describing this, the chosen concept for understanding the interviews is opened up, as well as the process of choosing this theoretical concept. In the middle part there are the results of the interviews,

followed by an analysis of them, presented together with the literature-based listing of opportunities. Before concluding, references to an example business model are made.

## 1.2 A short definition of the entrepreneurial opportunities

One of the most profound authors, S. Sarasvathy, has reflected on the concept of opportunities and the use of it by the academic discipline, with some critical tones (Sarasvathy, 2014). She proclaims that “the concept of entrepreneurial opportunities” both operates deep in the academic field of the entrepreneurial studies and has significantly variance in its definitions. Within the definitions there are some shared elements, like newness and the potential for sales to generate gains – no matter if it is a service or product being sold. But, most importantly, there is strong variance concerning the interpretation of whether the opportunities exist before they are perceived (*per se*) or only in connection to the perceiver (Sarasvathy, p. 306, 2014). Since my background lies in analytic philosophy, my inherited epistemological standing is critical realism, meaning that I see the entrepreneurial opportunities to exist to some extent autonomously, before or independently to the perceiver. This epistemological frame is in line with Shane’s (2003) understanding of entrepreneurial opportunities and the means of generating them. The definition of *entrepreneurial opportunities* that I am using is well formulated by the article of Shane and Venkataraman (2000).

“To have entrepreneurship, you must first have entrepreneurial opportunities. Entrepreneurial opportunities are those situations in which new goods, services, raw materials and organizing methods can be introduced and sold at greater than their cost of production (Casson, 1982). Although recognition of entrepreneurial opportunities is a subjective process, the opportunities themselves are objective phenomena that are not known to all parties at all times “(Shane & Venkataraman, p. 220, 2000).

This definition covers the newness, profit, services and the pre-existence of the opportunities, having the comprehensive nature needed to be applicable to the aims of this study. Later on, Shane’s view of the sources of opportunities will be gone through in detail to generate some examples of the opportunities formed when combined with the data gained from the interviews.

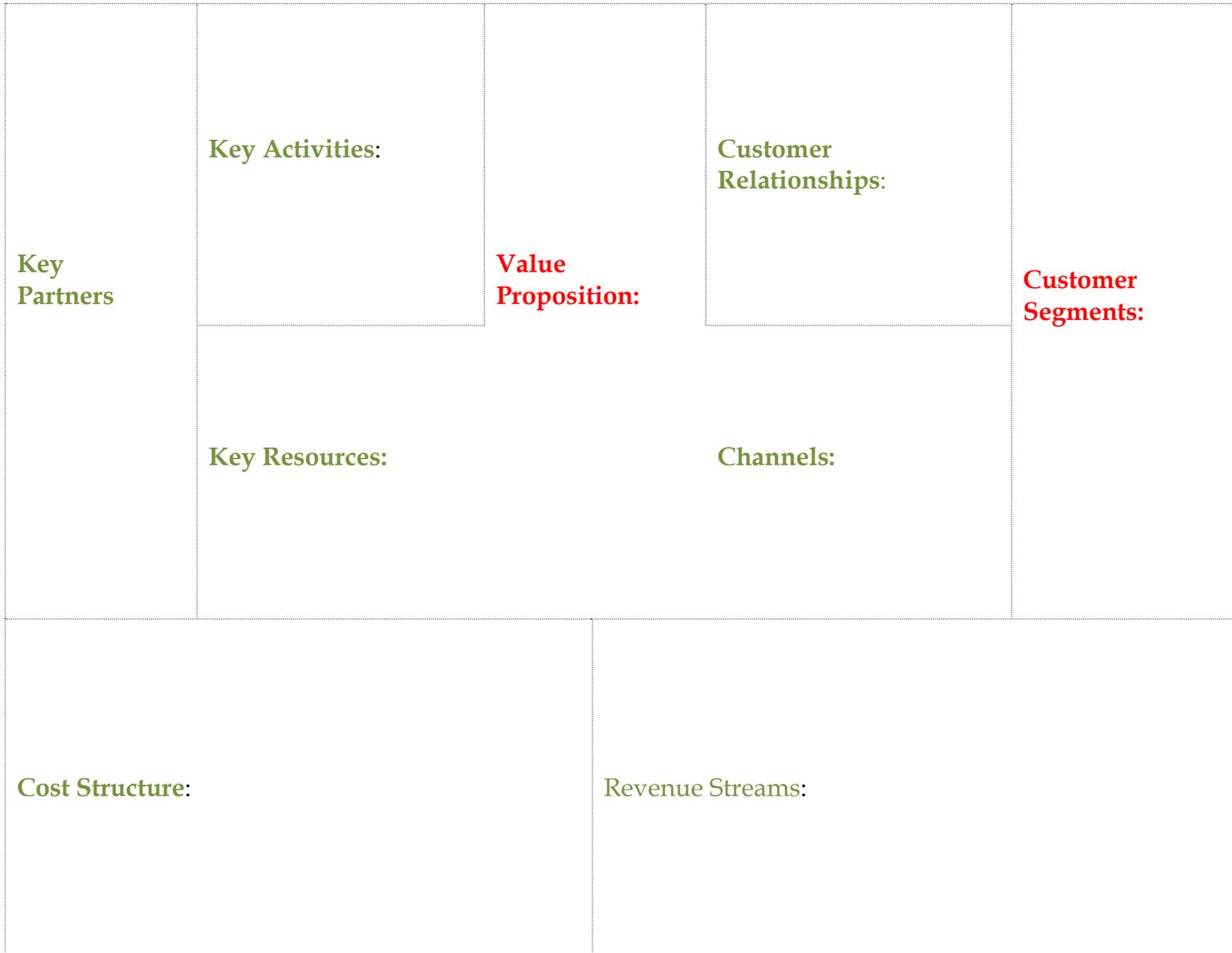
### 1.3 The Business Model Canvas - a tool to represent the opportunities

As presented above, there are multiple sources of and multiple opportunities to be chosen from. In this paper, to represent the opportunities and to make them available for examining and perhaps even for harvesting, I have decided to use the Business Model Canvas as a vehicle. According to Teece, the business model is a conceptual model of a business; it is the “management’s hypothesis about what customers want, how they want it and what they will pay, and how an enterprise can organize to best meet customer needs, and get paid well for doing so” (Teece, 2010, pp. 173–174). So, as stated above, I will represent those entrepreneurial opportunities as a hypothesis of a business model. I formulate my hypothesis according to a business model structure in order to make it suitable for assessment. The business model is a well-known concept to the practitioners, the academics and also to those within the entrepreneurial discipline (Trimi & Berbegal-Mirabent, 2012), so it is a suitable vehicle to support the shared assessment of the feasibility of the represented opportunities.

Therefore, to represent and analyse opportunities later on, I will use the Business Model Canvas. The Business Model Canvas is presented by Osterwalder et al. (2010) and is described as “A shared language for describing, visualizing, assessing, and changing business models” (Osterwalder et al., 2010, p. 12). So, for representing my hypothesis of the business model, in other words. the opportunity reframed, I will use the Business Model Canvas to provide a shared and understandable structure.

As Sarasvathy presents it, the key capability of the entrepreneurial discipline is being able to theoretically analyse not yet existing artefacts like firms and markets (Sarasvathy, 2001, p. 244). As is understandable, some challenges may arise. I have solved the projected nature of entrepreneurial potential - the opportunities - by representing them as hypothesis in this “shared language”, aiming by this to give them enough rigidity to be assessed. The Business Model Canvas is having nine “building blocks” to describe how the profit is generated by the company. These blocks are Key Partners, Key Activities, Key Resources, Cost Structure, Value Proposition, Customer Relationships, Channels, Customer Segments and Revenue Streams. The building blocks are covering all the main business areas: the customers, making offers to them, the infrastructure needed to supply them (channels) and the financial viability. (Osterwalder et al., 2010, p. 15-17.) For using this tool, the blank blocks are to be filled up, which results as description of the business model in accessible way. The point is to gather the business model hypothesis on one canvas and start evaluating the elements (Blank, 2013, p. 5). The core questions are: Who is the customer? What creates customer value and how to deliver said value? So, the business model is an architecture of costs, revenues and the process of making modifications to them (Zott, Amit & Massa, 2011, p. 1038). I use the business model framework as a structure for information analysis. With the situational picture produced by the business model framework, I am more capable of understanding the entrepreneurial opportunities that may arise from observation made. I integrated the model into the interviews and use it as part of the interpretation as well. In this way, I

have a more solid background upon which to found and estimate entrepreneurial opportunities. The blank Business Model Canvas is presented below (Table 1).



*Table 1 The Business Model Canvas (Osterwalder et al., 2010)*

## 2. SHIPPING: “A FASCINATING BUSINESS”, STRETCHING BACK OVER 5000 YEARS

The Finnish grand old man of shipping economics, Jouko Santala, described the term *merchant shipping* as follows: “a subsystem to world trade, tasked to perform the water transport or facilitate other water related exploitation; this subsystem is built from technological, economical, managerial and social elements.” (Santala, 1989, p. 13).

Stopford’s *Maritime Economics* (2009), starts its sea transport chapter by noting that “shipping is a fascinating business”, stretching back over 5000 years. He mentions names like Columbus and Onasis in order to highlight the pioneering spirit and shipping super stars (Stopford, 2009, p. 3). Stopford also points out that with such a history, there is already much knowledge generated, and theory and practise can be usefully combined (Stopford, 2009, pp. 3–4). And even when Stopford stresses shipping’s role in global development (Stopford, 2009, p. 3), I see a lot of traditional and rigid structures that still play a role today. I can take *Shipping Practice* by Edward F. Steven, the first edition of 1932, and agree on the definitions used: *the shipping company* is organised to (1) run direct lines between named ports or to (2) own vessels which can be *chartered* “as and when business is offered.” Within this thesis I concentrate on the latter aspect, on shipping happening via a chartered vessel, contracted for a longer or shorter time period to do transport services. This chartering business has a market of its own called the *freight market*. The freight market trades sea transportation (Stopford, 2009, p. 177) between the shipowner (who has the transport capacity) and the cargo owner (who needs the transport). This is important, because it is the meta-level that frames the shipowner’s earnings. Unfortunately shipping is not this simple; the so-called shipping market can be divided into four smaller markets: the freight market, the shipbuilding market, the sale and purchase market (second-hand vessels) and the demolition market (Stopford, 2009, p. 177). Alternatively, it can be divided into two bigger ones, namely the freight and vessel markets, covering all these smaller markets (Tapaninen, 2013, p. 58). If we follow the deviation made by Tapaninen (2013), the freight market – the market setting the *day rates* for the vessels, paid by the charterer or cargo owner for transporting the cargo – is the first market, a kind of a service market. The second market is for the vessel itself; in this market the vessels are built, recycled (scrapped), sold and bought. This market covers new ships as well as second-hand vessels (Tapaninen, 2013, p. 58). This market is more about

servicing and providing the equipment itself. These markets are like the two sides of a coin, one giving the need for transport and the other giving the supply. Together they set the freight or the day rate paid, meaning the daily compensation agreed upon by the cargo owner and the shipowner.

## 2.1 Written sources for shipping

When it was stated above that there are multiple sources of information available for shipping, it was referring to academic writing. Since shipping is not well covered in modern academic writing, even less so in the entrepreneurial discipline, I use multiple sources to especially cover shipping in general. The most cited author in shipping is Stopford (2009), and one literally cannot read anything without meeting a reference to him. To support Stopford with more up-to-date information, I use publicly available sources, like reports from Clarkson and Platou broker houses, to whom Stopford also refers, together with some governmental policy papers and works by other, minor authors. When going into the details of bulk shipping, I use both the interviews, and academic journal articles and monographs.

All in all, the literature available for shipping is more practitioner driven than academically driven, which can be also seen as a positive element, since there is not a great deviation between these realms, giving the academic work of the future a better possibility to make a difference. In their article, Hughes et al. (2011) visualised the different channels for interaction between academics and practitioners.

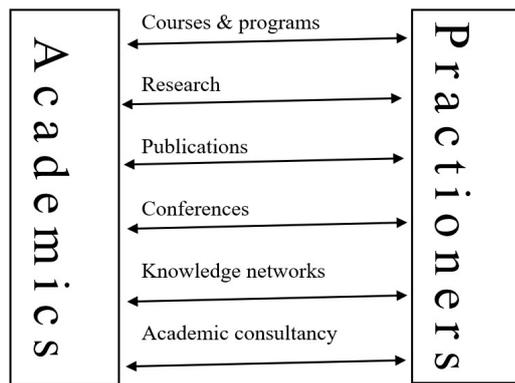


Figure 1 Routes of Academic-Practitioner Engagement (modified from; Hughes, Bence, Grisoni, O'Regan & Wornham, 2011, p.45)

In shipping one could say that the routes of engagements are dominated by the practitioners, followed by the academics. In the Finnish context the most established body of academic shipping writing is by MKK Merenkulun Tutkimuskeskus (Centre for Maritime Studies [CMS])<sup>1</sup> and Kotka Maritime Research Centre (KMRC).<sup>2</sup> While the first institution arranges topical seminars and conferences, both have their own publication series. Though the seminars are not very well connected to academic research and concentrate more on daily questions, like those concerning vessel digitalization, or studies ordered by the government or NGOs.<sup>3</sup> The only Finland-based maritime economic professorship already ended in 2008, and the focus has changed to logistics, shipping been seen as a part of it (*Turun Sanomat*, 2008). Recently, a very positive signal for more economically driven thinking was a doctoral thesis made entitled "Feasibility of commercial cargo shipping along the Northern Sea Route" (Kiiski, 2017). The topic referred to supply chain management, and the thesis did not recognise shipping as a line of the service industry, but saw it as a logistic option (Kiiski, 2017). This is, of course, not in line with my focus, as I see shipping more as an occupation and service provided to industries.

<sup>1</sup> <http://www.utu.fi/en/units/cms/Pages/home.aspx>

<sup>2</sup> <http://www.merikotka.fi/kotka-maritime-research-centre/>

<sup>3</sup> <http://mkkevents.utu.fi/>

## 2.2 The shipping markets: The freight market and vessel market

As presented above, the freight market sets the eminent frame for generating the sales and revenue in shipping, according to the set demand. The second part of the market – the vessel market – affects the freight market by allocating the capacity of this market. The demand for cargo transport is, in the short term, acting according to annual changes, like those of the harvest seasons, and in the long term, reacting to the changes in economics (Tapaninen, 2013, pp. 58–59). This, together with the logic of the vessel market, gives the shipping market its cyclic and volatile nature. This is the field in which bulk shipping is happening.

To further visualize the volatility of markets, I have chosen a few figures. Firstly, one for the shipping – a figure from the most classical book on maritime economics, *Maritime Economics* by Martin Stopford (Figure 2). This presents the volatility of the bulk shipping market, showing the vessel's day rates to vary from “an exiting market” to “sentiment rock bottom” (Stopford, 2009, p. 118). How can one survive in this world? Stopford compares the survivors to marathon runners who are able to run so long that the competitors give up, and vessel scrapping and lay-ups heal the market. He also says that it is not only about surviving the hard times, but also about making wise decisions during the up times, which count the most because, he says, during the hard times it is all about the company's financial performance and capability to handle the down going cash flow. He also points out market “sentiment”, which has to sometimes be opposed (Stopford, 2009, pp. 217–218). The charter rates in bulk shipping 1947–2007 are presented in the figure below (Figure 2). There you can see both the freight prices and world events in connection to them. It is easily understandable that such environmental requires a lot from the long-time players.

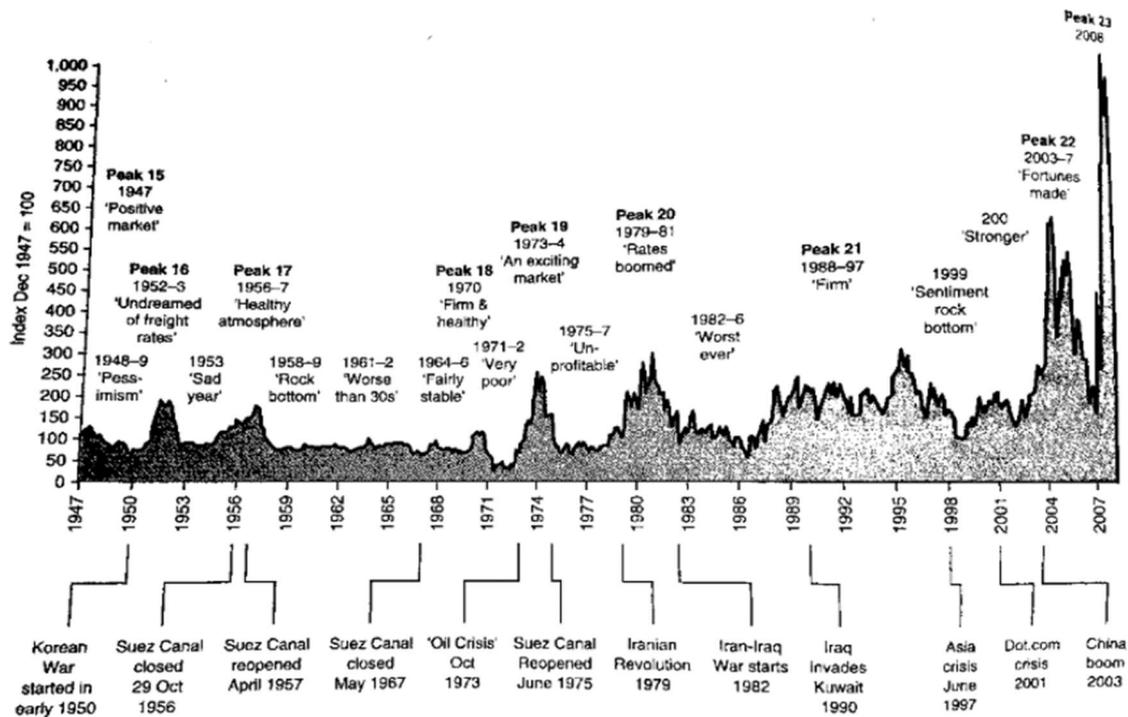


Figure 2 Bulk ships' freight rates index 1947–2008 (modified from Stopford, 2009, p. 118)

The second figure presents another market – the bulk *vessel* market. The source for this figure (Figure 2) is the annual Platou Report by R. S. Platou (Oslo). Platou is an established source of market information (see for example Stopford, 2009, p. 791). From the chart on the left in the figure one can see the demand for vessel capacity, the supply of vessels available and the overall utilization rate of the vessels (The Platou Report 2015, p. 20). chart on the left in the figure, one can see the price paid for second-hand vessels; in this chart they are using vessels that are five years old (The Platou Report 2015, p. 20).

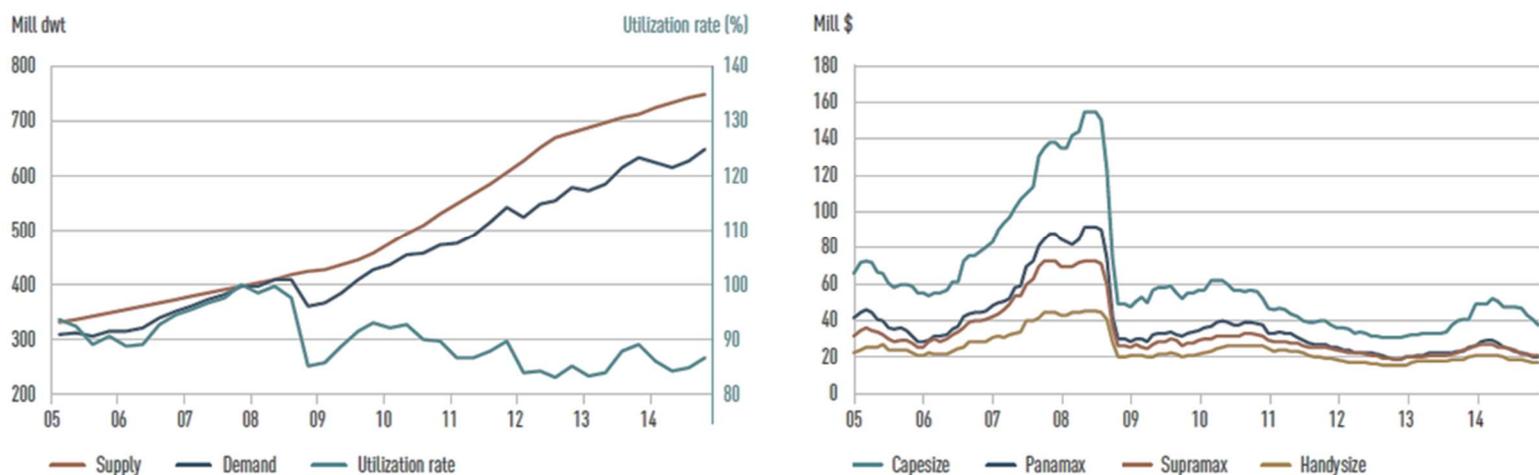


Figure 3 Utilization rate and market value (5 years old vessels) of bulk carriers (figures captured from *The Platou Report 2015*, p. 20)

For understanding the true meaning of the utilization rate – also in shipping – the ratio between charter days and lay days is crucial; the charter rate should cover also all the lay days (see for example Stopford, 2009, p. 220). But in this weak market situation it might be rational to just minimize the losses by chartering the vessel at almost any day rate in order to get something. So, the utilization rate tells us more about the charter rates than the supply curve.

To get the whole picture, we have to also understand the vessel market: the connections between new buildings, second-hand vessels and scrapping (Tapaninen, 2013, p. 63). The number of new vessels and those dismantled or rather recycled is adjusting the amount of vessels available. To open the picture, I shall present one more figure. In this figure (Figure 4) there is a curve representing the selling price of the vessel and below it is the curve showing the scrapping value of the vessel. When they come close enough to each other, the amount of vessel scrapings peaks (the pillars under the curves). This figure uses the data of very large crude carriers (big raw oil tankers), but it visualizes the phenomenon very well (Mantell, 2012). It should also be pointed out that the vessels are scrapped in order to have ship steel for the new builds.

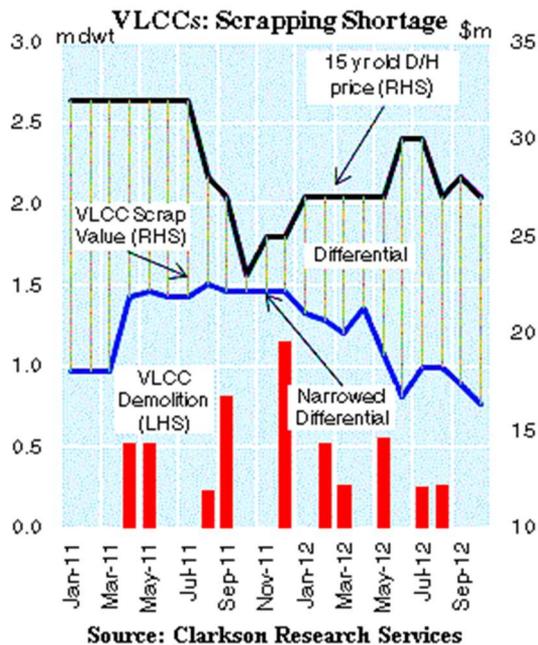


Figure 4 Vessel scrap value versus selling price (very large crude carriers (tankers)) (figure captured from Mantell, 2012)

There are two reasons why the vessel market is crucial: firstly, the vessel market sets the day rate because it has a direct impact on the amount of vessels available for the cargo charterer. Secondly, the selling and buying of the vessels, the so-called asset play, can have a great role in the gains and losses of shipping: “As successful shipowners often say in a reflective moment, ‘We don’t trade cargo, we trade ships.’” (Stopford, 2009). Success in asset play is one key element on this marathon run. Or at least it has been, as is presented in BIMCO article about future of the dry bulk shipping industry (2016). Another article in *The Economist* drew a very dark picture of the situation: the scrap market is not pulling out the old vessels because of the Chinese steel industry has produced so much cheap steel to the world market that the vessel’s scrap value is far too little for small family business not willing to settle for such prices. Also, the new scrapping regulations have complicated the situation (The Economist, March 2<sup>nd</sup>, 2017). Anyhow, it should be noted that on the Finnish shipping barometer (Varustamobarometri) for the year 2017 (published at the end of that year), hopes have already been raised, even though the competition is seen as tough.

## 2.2.1 Financial performance in shipping

Stopford (2009) separates the financial performance of a shipping company into three elements: the day rate or revenue the vessel is earning, the costs of financing the company and its vessels, and the running costs of operating the vessel (Stopford, 2009, p. 219). From these three elements listed by Stopford (2009), actual (good) financial performance is (in this study) seen as an outcome of harvesting entrepreneurial opportunities. So, the practical details of the three elements are not details covered by this study, since the focus is more general or concentrating on those elements “not yet existing” (Sarasvathy, 2001, p. 2000). Similarly, the financing cost of vessels is not covered in detail in this work, though it can though be said that during the literature review a few elements relevant to bulk carriers (or phrased shortly, *bulkers*) were raised. Theotokas presented how the family structure of Greek companies is an advantage when arranging ship finance (Theotokas, 2007, p. 75). Also, the role of long-time charters as a means for quarantining ship financing was raised in the literature review (Harlaftis, 2014, p. 256) and the long-term charters, together with vessel investments, were also mentioned during the interviews.

Among other elements, the dynamics of the earnings of the vessel have been opened up above. We have seen that the day rates may vary. To give more concrete examples about the role of the day rate, Stopford presented how, between the years 1990 and 2005, vessels in general (tankers, bulkers, containers, LPG tankers) have earned on average \$14 600 per day, but the (published) day rate has varied from \$9 000 to \$42 000 per day (Stopford, 2009, p. 321). Put simply – the markets in shipping are volatile.

The third element in Stopford’s (2009) list is running costs and handling them. Inside the running costs there are the HR costs, stores, maintenance and repairs, insurance and the administrative side (including chartering) (Stopford, 2009, p. 220). Again, as will be presented later on, the handling of the running costs has been seen as a key element in the success of Greek shipping, where it has been described as “a critical success factor for companies that managed over-aged ships of high operational cost, a main reason usually for their sale by their previous owners.” (Theotokas, 2007, p. 69). Stopford puts it down on paper in a very concrete manner: an old hull need new steel plates here and there, an old main engine needs more maintenance and it uses more fuel. In a new ship this is totally different – but so are the investment costs; the old vessel can be financed with no debt or less debt. And that is an advantage, especially in hard times, because mortgages do not give time outs (Stopford, 2009, p. 220). It should be pointed out that in recent times, the age of the Greek fleet is decreasing (Theotokas, 2007, p. 70), which might lessen the significance of this element.

But, all in all, these three elements and handling them, perhaps even in a novel way, are part of the good financial performance in shipping that sometimes arises from harvesting entrepreneurial opportunities.

## 2.2.2 Bulk shipping characteristics

In general, bulk ships are one of three main categories of ships used in modern sea transport, the categories being (1) bulk carriers and (bulk) tankers, (2) specialized ships, which are tailored for their cargo, and (3) container ships (Stopford, 2009, p. 36). Nowadays bulkers account for roughly one third of the world's merchant fleet (Stopford, 2009, p. 64).

As Stopford puts it, there is nothing remarkably new in the key strategy of bulk shipping: cutting transport costs by "carrying cargo in shiploads" (Stopford, 2009, p. 417). The cargo transported with bulk carriers is either liquid bulk (like crude oil, other oil products), liquid chemicals (like wine, caustic soda, vegetable oils) or dry bulk (like phosphates, grain, iron ore, coal, bauxite, steel products, cement, sugar, forest products, sulphur) (Stopford, 2009, p. 64).

Before the modern threefold sea transport, transport was done by liners taking care of regular transits and passengers, and tramp ships taking the cargo from anywhere to anyplace, having been chartered from one port to another. The uprising of the three categories was the solution or the reason for the extinction of the "proud, conservative shipping industry" who ruled the seas for more than 100 years (until the 1950s). For the bulk transport industry, the keys to the success were the rising manning costs and the new model where the cargo owners, namely the charterers, were interested in making long-term time-charter contracts, which could be used as guarantees in financing the vessel investments. The manufacturers in America, Europe and Japan were so eager to ensure the raw material flow that they were willing to enter in to this new way of arranging vessel finances (Stopford, 2009, p. 35). It is said that the Greek shipowner Onasis was one of the first to enter into this arrangement in order to raise finances for buying and building tankers (Harlaftis, 2014, p. 256). On the other hand, the low manning cost is seen as one of the main reasons seen behind the Greek success (Triantafylli & Ballas, 2010, p. 635).

So, when pulling together the above, the characteristics of bulk shipping are: transporting the various cargo in ship loads, the great amount of ships and strong connections to manufacturers and competition, stretching to the details of ship operating economics.

## 2.3 Excluding some of the entrepreneurial activities of shipping – opportunism and piracy

Entrepreneurship, even though it is popular in public speeches, can be also be seen to support to the darker side of shipping, meaning the turn from economical activism to opportunism. It is seen in the actually criminal side of shipping – the pirates, still living and raising insurance costs – but also the absence of risk avoidance, sometimes with even darker consequences. Vinagre-Ríos and Iglesias-Baniela (2013) studied management's appetite for risk taking in connection to shipping market earnings. They point out that the shipowners are, in multiple ways, adjusting vessel operations to meet "the target level of risk" (p. 393), meaning the savings found in running costs like manning, maintenance and working hours. Therefore, the level of maritime accidents has not been downgraded with the means taken into use, but has stayed at more or less the same level. The industry is adjusting the risk they take, for example through the number of crew members or maintenance work done or the way that the costs meet the shipping market's day rate levels. So, when the (passive) safety level is raised by legislation, it is compensated for by taking risks on the operative side of the industry (Vinagre-Rios et al., 2013, p. 395). As is understandable, the aim of this work is not to mix opportunities with opportunism, as theoretical as its standpoint might be.

If the opportunism of management is the legal side (though not the ethical side) of entrepreneurialism, the illegal side of shipping is often called piracy. In his article Roth studies entrepreneurship and piracy (Roth, 2014). In this context piracy can be seen as an "informal economic activity", as a problem to economic growth or even an "economic terrorist" (Roth, 2014, pp. 400–401). In an academic sense, analysing piracy raises the question of "the legitimate business models" and which are legal entrepreneurial activities and which are not (Roth, 2014, p. 401). Existing business models and the altering of them or, as mentioned above, the ethical sustainability of the used models are issues worth contemplating when trying to find new models for bulk shipping. An example for the shipping industry can be found from the Alaskan king crab industry (Alvarez et al., 2015); the king crab industry players had to build a quality standard for crab meat processing and drive it into force by their actions. The absence of legislation was risking the reputation of the industry. The same mechanism also worked for fishing allotments where the industry sought to protect itself (Alvarez et al., 2015). The similarity between pirates and king crab fishermen lies in the placement of the entrepreneurial opportunities which fall outside of the (existing) legitimated realm. The solution, of course, differs a lot; while the fishermen sought and lobbied for a legislative frame, the pirates are comfortable not fitting in (if they were, they would become privateers).

We can anyway conclude that the entrepreneurism we are seeking for here is not set at either end of this line of thought; it is not opportunism, where you play with the lives of seafarers, nor is it an illegal business model, incompatible with organized society.

### 3. THE CONCEPT OF ENTREPRENEURIAL OPPORTUNITIES AND THE SOURCES OF THEM

Without an opportunity, there is no entrepreneurship. A potential entrepreneur can be immensely creative and hardworking, but without an opportunity to target with these characteristics, entrepreneurial activities cannot take place. (Short et al. 2010)

It can be said that entrepreneurship means the recognition and exploitation of opportunities (De Carolis & Saporito, 2006, p. 41). The opportunity, as a concept, is an immense part of the entrepreneurship, together with the concepts of an entrepreneur (or even a heroic entrepreneur) and (sustainable) opportunity harvesting. The opportunities can be examined from multiple angles. What are more or less shared are the most important characteristics of the entrepreneurial opportunity, meaning mostly the newness and potentiality to generate earnings (Sarasvathy, 2014). The types of opportunities can also be listed: they can be *imitative*, when they generate the revenue by copying the existing models; they can be *incremental*, when they generate volumes by discounts or other savings; or they can be *innovative*. For the innovative opportunities there have to be at least three triggers present: an unexpected event or market situation, the entrepreneur's observation of such an event or situation and her or his expectations of the consequences. These are then followed by a hypothesis for a novel way of generating revenue. The innovative opportunity needs both counterfactual thinking and mental stimulation to exist (Gaglio & Katz, 2001, p. 99). Indeed, mental simulation – or rather, information about the situation – is also widely covered in literature. The exclusiveness of the information about the opportunities is something that is also strongly connected to the concept of entrepreneurial opportunities (Shane & Venkataraman, 2000, p. 220). The exclusiveness of the information can also be the outcome of the capabilities of the entrepreneur. Some say that the entrepreneurs are able to perceive reality more accurately and are more capable of understanding the consequences and potential outcomes (like business opportunities) (Gaglio & Katz, 2001, p. 97).

This role of the entrepreneur is one of the parts of “the triangle” – which consists of opportunities, harvesting them and the entrepreneur as an actor – that is most argued about. Is she or he finding opportunities or generating them? Regarding the existence of entrepreneurial opportunities and the sources of them, there are two main schools of thought: one according to Schumpeter's line of thought and another of Kirzner's. The

fundamental difference lies in the question of whether opportunities are discovered or recognised (George et al., 2016, p. 314). Some say that entrepreneurs are those who “create the opportunities where others do not” (Mitchell et al., 2002, p. 96), while others settle for referring to the entrepreneur’s talent and ongoing interest in discovering opportunities (Kaish & Gilad, 1991, p. 59).

Since my background lies in analytic philosophy – my inherited epistemological standing being critical realism – I choose Schumpeter’s line of thought, seeing entrepreneurial opportunities to exist to some extent autonomously, existing before or independently of the perceiver. Scott Shane, who I mostly support in my concepts of opportunities and most importantly sources of them, is one of the most cited authors in this particular field and he is also an established supporter of Schumpeter’s line of thought (George et al., 2016, p. 314).

### **3.1 Entrepreneurial opportunities and Shane**

The theoretical concepts of opportunities used in this work mainly come from Scott Shane’s book, *A General Theory of Entrepreneurship* (2003). The aim of using the concept of entrepreneurial opportunity is to highlight and enjoy the more practical side of the discipline. In his monograph, Shane (2003) opens up the entrepreneurial opportunities: how they are born, found and used. This goes well with my research question: Are there entrepreneurial opportunities in bulk shipping? And if so, where? According to Shane’s overall model, the sources of opportunities are: (1) technological changes, (2) political and regulatory changes and (3) social and demographical changes (Shane, 2003, p. 23). If we reflect on the situation, in shipping to and from Finland, there are no remarkable social changes nor demographical changes predicted. But there are both technological and regulatory changes happening and anticipated to happen. The regulations adjusting vessels’ environmental performance are being raised as we speak and demand further technical changes and investments. Also, there is a certain amount of ongoing buzz

around ICT and vessels <sup>4</sup>. It mostly concerns the Uberisation of the shipping. Will it make any difference? At the moment there is not one platform that is preferred over others. But after one gains dominance, it might make a difference. Of course, as found out during the interviews, the pool of suitable vessels is not that big, but in the bigger picture there is surely enough vessels to support such ecosystem and an awful surplus of vessels, which will be strongly affected by the cargo optimization since the utilization rate place such a role in industry. So, we can conclude that there is a chance of new entrepreneurial opportunities arising from these changes.

The second question concerns the ability of an individual to find entrepreneurial opportunities. According to Shane's collection of concepts, the following is a list of capabilities in correlation to finding opportunity: access to information, life experience, information searches, social ties and opportunity recognition (Shane, 2003, pp. 45–50). Even when placed in the context of an academic writing, I as author have only my personal capabilities as an individual to be able to find opportunities. Since I have not been practiced any other entrepreneurship than intracompany entrepreneurship (intrapreneurship), I cannot say too much on my ability to recognise an opportunity. I have nevertheless taken part in three different sub-company foundations and build ups. When it comes to the other aspects, I have been working with R&D (Shane, 2003, p. 47) and strategy work in shipping company for some time, lately spending a few years as a development manager. So I have multilayer information of the new technological and regulatory changes. I have already worked in various positions in a company during 15 years in shipping and I had tried a few things before that. When it comes to information searches (Shane, 2003, p. 48), that is what I am actually doing here, so that is covered as well. The social ties are as important as anything and I am planning to actively use them to collect information about the opportunities. Fortunately I have a diversified personal network so not all of my friends are in shipping. For example, those working in ICT or the games industry give a slightly more vivid picture of the future than those mostly interested about ships. When referring above I can say that I have reasonable capabilities available at least for the theoretical opportunity recognition. According to Shane (2003) there are certain individual capabilities that build up entrepreneurial competence: "education, risk-taking propensity, internal locus of control" (p. 19). But since I concentrate more on opportunity recognition than exploitation, these elements do not play such an important role in my work.

Thirdly, to be an entrepreneurial opportunity, there should also be some concern about the profit. According to the Shane (Shane, 2003, p. 28), entrepreneurial opportunities can turn out to be non-profitable, but they should anyway seem to be profitable at the starting point. The idea is that in order to be entrepreneurial opportunities, they should be believed to be profitable by the entrepreneur (Shane, 2003, p. 28). It is easy to criticise this by referring to overly hopeful gold diggers, so I would suggest that in order to be termed

---

<sup>4</sup> For example: "Marine Innovation Centre Helsinki is the Ecosystem for marine innovations development and hub for startups, research organisations and business partners in the very heart of shipbuilding industry". (<http://www.michelsinki.com/>)

*entrepreneurial opportunities*, there should be some agreeing stakeholders to support this interpretation.

From the framing it can be thought that the upcoming changes might provide an opportunity; it can also be predicted that the author has reasonable capabilities to recognise those opportunities. But it remains uncertain if there really are any opportunities to find, and if so, if they are solid enough to be believed in, also by the stakeholders.

As I am writing my master's thesis about entrepreneurship, I have chosen one of the core questions of the discipline to be the subject of my academic investigations: the entrepreneurial opportunity. I am further focusing my studies on finding out if (in this limited case) there are any actual and recognisable opportunities arising from the academically recognised sources of entrepreneurial opportunities. As entrepreneurial opportunities, I name those which I can consider to have potential to support founding a new business with the credible ability to sustain itself in the future. For measuring this I will consult the key operational components of successful entrepreneurial performance: survival, growth and profit (Shane, 2003, pp. 5-6). As can be seen here, and as is generally agreed upon, in the field the actual work of recognising and evaluating the opportunities of a certain case can only be done from individual's standpoint. Which of course sets certain requirements for an individual trying to do this, as has been presented and analysed above.

### **3.1.1 The nature of entrepreneurial opportunities**

The author Scott Shane has laid the ground for entrepreneurship, especially with the concept of entrepreneurial opportunity. In his monograph he uses the Individual-Opportunity Nexus as a theoretical frame (Shane, 2003). This means that Shane believes that the economy, because it is not in a constant state of equilibrium, is opening opportunities where new services can be produced with lesser costs than they give value

to the customer (Shane, 2003, pp. 9-10). This quite straightforward definition of the background of the entrepreneurial opportunities is solid enough for the needs of this paper. One can notice that he believes that the opportunities exist without the individual noticing them – they are not constructed in that sense. Since I am also bound to the tradition of critical scientific realism, I find this standpoint comforting. Even though the actual perception of the opportunities may vary, they are not in concept created (solely) by the entrepreneur.

The entrepreneurial opportunity itself is defined by Shane as “a situation in which person can create a new means-ends framework for recombining resources that the entrepreneur **believes** will yield a profit.” After making this definition, he raises two points. Firstly he points out that an opportunity must be novel in order to be an entrepreneurial opportunity. More interestingly, he notes that not all opportunities seen as entrepreneurial ones turn out to be profitable (Shane, 2003, p. 18). So, we can see that when connecting this assumption to the background thesis (presented above), even though there are certain “solid” opportunities which are both profitable and perceptible (to an individual), there are also ones which are neither. To open up this conclusion, I present the following matrix.

A profitable entrepreneurial opportunity that is perceptible as one	A profitable entrepreneurial opportunity that is not perceptible as one
A non-profitable entrepreneurial “opportunity” that is perceptible as a “profitable entrepreneurial opportunity”	A non-profitable entrepreneurial “opportunity” that is perceptible as one

*Table 2 The opportunities matrix*

We can also work forward from here and, depending on our risk reserves mode, be more considerate about those opportunities that are not perceptible or that we falsely perceive. During this paper I try of course to extend the realm of “a profitable entrepreneurial opportunity that is perceptible as one” as far as I can towards the realm of the imperceptible, while of course staying clear of the field of non-profitable opportunities.

### 3.1.2 Perception, opportunities and changes

This question of perception and its realm – presented as a form of information – is also partly covered by Shane. He presents two kinds of trigger that open up opportunities – or, I should say, the perception of them. The first one is the Schumpeterian perspective, where changes in “technology, political forces, regulation, macro-economic factors and social trends” create the information needed to combine (cheap) resources in a novel way to create value (Shane, 2003, p. 20). In this case, the world is changing and the first one to understand this will make a profit. So this model believes that the realm of the “profitable entrepreneurial opportunity that is perceptible as one” can grow and change. That the realm of opportunities is dynamic by nature, because either the physical world is changing – like the sea ice melting, opening up new sea lines in the arctic – or our capabilities or interests in using its resources – like recycling plastic – is rising.

The second trigger is the Kirznerian perspective, where the entrepreneurial opportunity only needs information about the more efficient use of resources and prior mistakes that have cumulated in surplus or shortage (Shane, 2003, p. 20, 22). This capability to see resources where the others do not more or less broadly looks at the realm of opportunities. Shane sees the latter kind of trigger to be less studied or perceived (Shane, 2003, p. 22), but I would rather say that inefficiencies and surplus are more connected in intrapreneurship, since they are more available within the companies own frames than available for new ventures. This of course does not cover the elements of disruption, where the surplus is located outside of the industries business models, rather than inefficiency of one company’s business model.

But even if the trigger for the opportunity is change in the physical or macro-economic world, or if it is more accurate information about the inefficiency of ongoing ventures, the sources giving birth to them have been listed in the academic world as follows: (1) technological changes, (2) political and regulatory changes and (3) social and demographical changes (Shane, 2003, p.23). I will get back to these changes a bit later on, when I am using them as tools.

### **3.1.3 Entrepreneurial process and opportunities**

In Shane's (general) theory of entrepreneurship, the entrepreneurial opportunity is one important part of the entrepreneurial process. Entrepreneurship is seen as a linear process with a starting point and an end point. Shane visualises this entrepreneurial process with seven boxes, starting with the "existence of opportunity" and ending with "performance" (Shane, 2003, p. 12). It might feel bit teleological or narrow, but the reasoning behind this (I would say) is the hope of connecting the academics more interested in the macro-scale to the questions of entrepreneurship. The macro scale, as a standpoint, is not totally out of my research interests either, so I am in accord with Shane in his linear assumption as well. Despite this, in this paper I only focus on the first two steps of this entrepreneurial process: (1) the "existence of opportunity" and (2) the "discovery of opportunity" (Shane, 2003, pp. 12). By this I avoid some of the questions about the relevance of such a linear theoretical assumption. I go further, pointing out that the existence of opportunities is something that I make a positive assumption about in order to be entitled to start discovering them. As is presented above, I do not believe in the perception of opportunities by using solely academic lenses, but done in active process of discovery as the recognition of opportunities is done in practice. This means that even though I have an academic standpoint here, there is no way I could observe the opportunities only in theory level, without taking part to the mental recognition or discovery process of those opportunities. With this I mean that even though I assume that there are such opportunities, my capabilities of knowing of them are limited by my capabilities of discovering them during the recognition process which should be alike to which the entrepreneurs are using. I'm stating that the knowing about the opportunities is not possible outside the process of opportunity recognition, and that is why in this work the mimicking of the opportunities is present (see also Sarasvathy, Venkataraman, 2011, p. 116).

## **3.2 Sources of opportunities, according to Shane**

As I sketched out above, the academic circle has listed plural sources for entrepreneurial opportunities. In his monograph, Shane arranged them into three main groups: (1)

technological changes, (2) political and regulatory changes and (3) social and demographical changes. The main element behind the groups, or rather drivers of opportunities, is a change having an effect on the value of a resource (or resources) (Shane, 2003, p. 23). For example, environmental worries, families without cars and better bicycle tracks have created a boom in freight bicycles. Restricted environmental regulations, together with low freight levels, have created a market for vessel engines and/or operations profiles suitable for very slow steaming. Shane also points out that there are certain differences between the groups of typical opportunities (2003, p. 23). As a different group he also presents (again following Schumpeter) forms of opportunities – five of them: (1) new products or services, (2) new geographical areas, (3) new raw materials, (4) new methods of production and (5) new ways of organizing the activity (Shane, 2003, pp. 33–34). As we can see, the first three groups are more or less trigger types of sources and the later five are more like realms of solving or using a solution. This is not heuristics – it is not about how to find out a business idea – but a typology built on empirical case analyses of historical evidence. Since I have mentioned above that the actual opportunities are not separated from the discovery process, I use this academic information to build a frame – an heuristic tool, if you please – to make a thought experiment, or a hypothesis about entrepreneurial opportunities in bulk shipping

1	Source: Technological changes
2	Source: Political and regulatory changes
3	Source: Social and demographical changes
4	Solution as a source: New products or services
5	Solution as a source: New geographical areas
6	Solution as a source: New raw materials
7	Solution as a source: New methods of production
8	Solution as a source: New ways of organizing

*Table 3 Sources of opportunities, according to Shane*

### **3.3 Sources of opportunities: Volatility in shipping**

As explained before, in many cases the sources of entrepreneurial opportunities can be found in changes in external factors. The volatility of shipping can also be seen as an amount of opportunity rising or diminishing, as it at least effects the charter rates available. A more complex question is whether a real entrepreneurial opportunity follows.

It might be on the safe side to say that with volatility there are opportunities for creating new services or enterprises, justifying the connection with entrepreneurial opportunities. Not all opportunities met by an entrepreneur are entrepreneurial opportunities, since there is certain need for profiting as well as meeting Shane's (2003) formulation.

The volatility of shipping has been explained by both external and internal factors. Firstly, the capability and timely manner of adjusting to the changes in demand enforces the volatility. Secondly, the changes in demand are explained by external events like wars, innovations, discoveries or price change in commodities like oil. Inside economics the internal factors, like time lags generated by time needed for the execution of decisions, mass psychology and other, commodity price changing effects as well as strong weather phenomena, are generating more volatility in shipping (Triantafylli et al., 2010, p. 627). This volatility can open entrepreneurial opportunities, support harvesting them or close the windows, giving the shipping its dynamic nature.

### **3.4 Sources of opportunities, according to Cohen**

As stated at the very start of this document, within the core of the entrepreneurial discipline is the idea that there is always inefficiency in markets, or if there is equilibrium, this state is not a constant but momentary (Venkataraman, 1997). This state can be seen to refer to market imperfections, and these flaws can be seen as entrepreneurial opportunities (Cohen et al., 2007). Cohen et al. (2007) listed the market imperfections as follows: inefficient firms, externalities, flawed pricing mechanisms and information asymmetries. More interestingly, Cohen et al. (2007) see that the opportunities if entrepreneurial should also be sustainable prospects, giving the entrepreneur a possibility to start sustainable entrepreneurship.

The first source of the opportunities is gained from inefficient firms; firms can be inefficient in both the utilization and allocation of their resources, leaving companies inefficient (Cohen et al., 2007, p. 38). Since *sharing economics* is now on everybody's lips, there is no need to explain the utilization rate in more detail. Of course, it is worth mentioning that the utilization rates of the vessels are low - around 40% if one believes the results of DIMEC -project (Raunio, 2016). The allocation can refer to both the surplus and the inadequacy of numbers. Cohen presents both transaction costs and natural-resource efficiency as examples (Cohen et al., 2007, p. 38) of inefficiency. According to Cohen,

reaching efficiency requires an efficient combination of supply and demand (Cohen et al., 2007, p. 38).

The second source is gained from externalities – the cases where third parties gain or lose something without any, or without sufficient, compensation from the actual value chain. Examples are pollution caused by the consumption or production of a service or product (Cohen et al., 2007, p. 40). In shipping the air pollution has been one such externality. And, in shipping too, the innovative ones have been able to generate triple bottom-line results (Cohen et al., 2007, p. 41).

The third source is gained from flawed pricing mechanisms; it covers both exhaustible or non-renewable natural resources and the undervaluation of renewable production (Cohen et al., 2007, pp. 42–43). When applying this thinking to shipping, flawed pricing is pushing the operators into unhealthy competition, where the day rate does not cover either capital investments or fair pay for the crew.

And the fourth source is gained from information asymmetries. This means that no single operator has all the necessary information, nor the capability, to make flawless strategic decisions. This is the most remarkable source of entrepreneurial opportunities (Cohen et al., 2007, p. 43). Cohen presents the energy efficiency of housing as the example of this type of flaw. Cohen presents reducing information asymmetry as the key to discovering entrepreneurial opportunities (Cohen et al., 2007, p. 44).

1	Inefficient firms
2	Externalities
3	Flawed pricing mechanisms
4	Information asymmetries

*Table 4 Sources of opportunities, by Cohen*

### **3.5 Presenting the sources of opportunities as a matrix**

When connecting everything above, an opportunity matrix can be built. If we want to keep the matrix on a higher level, we can set three main layers according to the literature sources (see Figure 6): firstly, the shipping market's volatility, meaning changes in demand and the time lag (others) need to adopt to the change (shown as the uppermost row). On the second row down, according to Cohen (2007), is the process efficiency of a firm (in its organisation and information gathering) and inefficiency at system level, like in

most externalities. And on the lowest row, according to Shane, are 1) the changes in the working environment of the company, 2) new products or services, 3) changes in geographical focus areas and political and regulatory changes – and technical radical innovations (Shane, 2003).

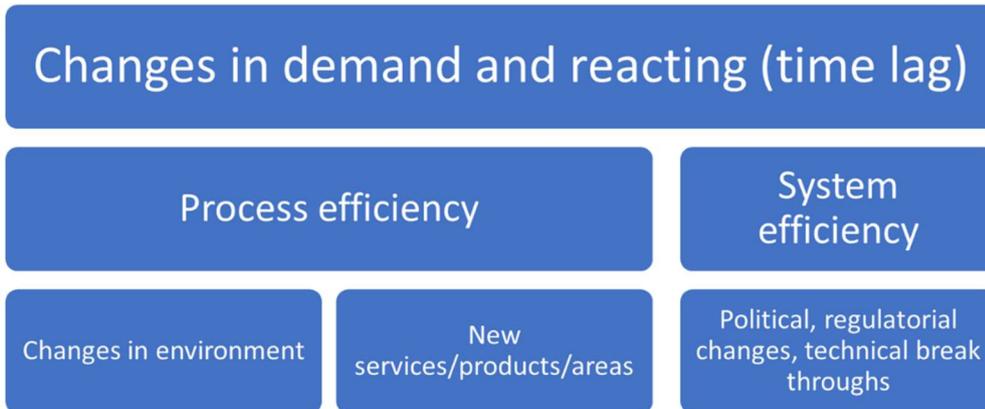


Figure 5 The sources of opportunities matrix

This matrix, based on the literature, seemingly covers most of the opportunities available. But since I am more driven to find opportunities with a connection to the interviews, I will present a more heuristic matrix which I use as a tool to extract the opportunities. This will be presented as one of the results.

#### **4. ONGOING CONVERSATIONS: ARE THERE ANY ARTICLES ABOUT ENTREPRENEURIAL SHIPPING?**

To connect entrepreneurship and shipping in a more evident way and to understand how the discipline of entrepreneurship has handled shipping (if at all), I did a systematic literature review. During the systematic literature review I was able to determine one theme area of discipline, which has actually been generating multiple cross-referencing articles. The theme was Greek shipping, mostly referring to bulk shipping. After presenting the methodology of the review and the preliminary results, I will go into details regarding this theme. I analyse Greek bulk shipping through the found articles. To support my analysis work and to generate a metric suitable for comparing the outputs, I use the Business Model Canvas, covering the logic of how the creation, delivery and capture of the value are done (Osterwalder et al., 2010, pp. 14-15). The aim is to be able to generate the business model of today to see if there are differences between it and the customer preferences covered by the interviews.

## 4.1 A systematic literature review of the entrepreneurial journals and shipping

The methodology of the literature review was a so-called systematic literature review, as presented in an article by Pittaway and Cope (2007). This setting of the review is in connection to the evidence based-thinking, wherein the ideals of empiric methods are written openly. The ideals cover the transparency, equality and reachability in a focused and consistent way. The ideals might sound bit ambitious, but the aim is to avoid the critical mistake of taking the evidence "as it is" and focussing on the results presented in peer-reviewed journals.

In practise I was not able to meet all those ideals of systematic literature review even at the start of the project, since in most cases the best-ranked entrepreneurial journals do not cover shipping at all. And the reference numbers of the suitable articles are low. So, since shipping combined with entrepreneurship is well recognised as an area, the numbers and solidness of "the evidence" is not at an ideal level. I will get around this by choosing one of the five articles meeting the criteria and working backwards from it to the pool of articles to which it refers, even though they are not individually published in high-ranked journals. I see that for building up the evidence, the corpus of cross-referred articles gives a more solid ground than a group of unattached but highly cited articles.

The criteria I use for the systematic literature review is the following: firstly, the journals are chosen from the top part of the ABS ranking (ABS Academic Journal Guide), bearing in mind that they have to be accessible from sources provided by university (JSBE). Secondly, the suitable journals must (a) focus on entrepreneurship and are searched through for references to shipping (b) focus on shipping or shipping logistics and are searched through for references to entrepreneurship or (c) focus on logistics and are searched through for references to both shipping entrepreneurship. The last requirement for the journals is that the found articles are less than five years old. I was forced to stretch this requirement out for some years more. The key words used in the searches are: "entrepreneurship", "entrepreneur", "shipping" and "shipowner". The suitability of the found article is found out by the title and if necessary by the short abstract. The results of the searches are presented in a table at the end of this document.

At the start of the review I chose the two best-ranked journals on entrepreneurship and the two best-ranked journals on logistics. To support these, and because of my preliminary experience of the availability of articles on shipping in ranked journals (at least, among those accessible from JSBE), I supported these four journals with two additional journals. These additional journals were the best-ranked shipping journal and another journal which has been publishing articles about shipping. The main obstacle in the search execution was that the journals were available via different portals with slightly different search engines and various algorithms. This prevented me from using exactly the same wording and phrasing. I tried to overcome this by using multiple searches. The result was minimal: I got altogether five articles, and three of them were from the maritime journal

*Maritime Policy and Management*. The two other articles were from the *Journal of Business Venturing*.

### 4.1.1 The results of the literature review

The aim of the systematic literature review is to find evidence from the literature and to use the literature in systematic and open way. As you can see from the previous chapter, the amount of the evidence available can very be limited. And more importantly, it is hard to say what in essence combines the articles of the Japanese maritime cluster (Shinohara, 2010), arctic shipping (Borch & Batalden, 2015), king crab fishing (Alvarez, Young, Woolley, 2015) and luxury yacht production (Jennings, Edwards, Jennings, Delbridge, 2015).

What kind of evidence base do these articles provide? It would of course be too black and white – and also only suitable for a more mature discipline – to expect that all the suitable articles should be published in high-ranked journals. As the evidence-based method itself has been critiqued for supporting the legitimization of the ongoing situation (Learmonth, 2008), it is not a surprise that the peer-reviewed articles found by the method do not cover in detail an area which combines a relatively new discipline – entrepreneurship – and a marginal academic discipline like shipping. Simultaneously it has to be kept in mind that one of the five articles (even when found in *Maritime Policy and Management*) was produced in connection with a larger setting of academic writing about shipping and bulk shipping. I will now go into detail about the article by Triantafylli and Ballas (2010) and the supporting articles around it. As brought up already by Venkataraman (1997), one challenge for entrepreneurship studies is the lack of cumulation of the knowledge.

## 4.2 Found in journals: Greek bulk shipping

To give a framing to the choosing of this particular article and those of its referenced articles that are investigated in more detail, I would like to start with the status of Greek bulk shipping within the shipping industry. The Greek influence on bulk shipping is remarkable. As can be seen from the table below, the Greek shipping fleet is the biggest in number and in volume and they also play a leading role in bulk shipping. What is still more interesting when taking into account the entrepreneurial discipline, is that most Greek shipping companies are family-owned small and medium size companies (Triantafylli et al., 2010, p. 628). Further, the family ownership is seen as one of the key elements behind the success of the Greek shipping services (Lagoudis et al., 2007, p. 2), for instance giving advantages in regard to ship financing. It can be seen that the family structure of Greek companies is seen to be positive (Theotokas, 2007, p. 75).

The visible and shared nature of the shipping industry for its part explains why the academic writing about bulk shipping is blooming in Athens and not in some other location. Of course, some other factors are needed as well, but it is easy to understand that connections with the university and shipping companies are tighter there. After visualizing the status of the Greek shipping in general I will go through in detail what have been seen as the key elements in shipping success.

### Table of the Week

#### Greek Shipping Fleet Focus

Greek Owned Fleet	Global Rank	Value	Global Share	Others / Comment
Fleet (GT)	1	195.9m GT	16%	Japan (13%), China (11%), Germany (7%)
Fleet (dwt)	1	333.0m dwt	18%	Japan (14%), China (12%), Germany (7%)
Bulker Fleet	1	167m dwt	21%	Japan (21%), China (16%)
Tanker Fleet	1	127m dwt	25%	China (8%), Japan (7%)
Total Fleet Value	3	\$91bn	10%	US (\$117bn), Japan (\$92bn), China (\$75bn)
Orderbook	3	24.2m GT	13%	12% of the fleet; 16% global average
Orders (2015)	3	117 orders of an est. \$6.9bn	9% (\$bn)	Japan (227 orders of \$13.1bn), China (175 orders of \$10.7bn)
Top Builders		1.South Korea (148.7m dwt) 2.Japan (84.5m dwt) 3.China (81.8m dwt)		HHI has built the largest number of vessels in the Greek owned fleet (286 ships)
Top Class		1.ABS (48.6m GT) 2.LR (35.8m GT) 3.DNV GL (33.5m GT)		
Top Flag		1.Greece (40.2m GT) 2.Liberia (37.1m GT) 3.Marshall Islands (34.5m GT)		

Greek Seaborne Trade	Volume	Global Share	Others
Estimated Imports (2015)	38mt	<1%	Japan (7%), China (22%)
Estimated Exports (2015)	19mt	<1%	Japan (2%), China (10%)

Source: Clarksons Research. Data basis start May 2016. Nationality based on "real nationality", i.e. the home country of the interests behind the primary reference company. Ownership in shipping is not always transparent and Clarksons Research data is not intended to confirm or otherwise the legal status of the companies or ships associated with them.

Table 5 "Greek Shipping – Still Number One!", May 27, 2016 (table captured from Clarksons Research, 2016).

As can be seen from the table above (Table 4), Greece is the most used flag, it governs most of the capacity within vessels and is leading in both bulker and tanker segments. This kind

of status is unrivalled in Europe and in the world altogether. IT also opens up both the role of shipping in Greece and in Greek academic writing.

#### **4.2.1 Findings from the articles about Greek shipping**

In their article Triantafylli and Ballas (2010) cover multiple parts for constructing the Greek business model. Even more so when spreading the review scope to cover those who Triantafylli and Ballas logically cite.

At the start, when explaining what shipping is, they refer to its nature as a service industry, which requires huge capital to be established. They also refer to both the volatility and the sensitivity to inner and outer factors (Triantafylli et al., 2010, p. 627). When presenting the strategies that companies are using, they highlight several factors. Firstly, the focus on the use of bulk carriers, as most Greek shipping companies have chosen this path (Triantafylli et al., 2010, p. 634). In that sense it might be more accurate to talk about an ecosystem or network when the whole nation focuses on one or two realms of an industry. It is easy to see the cumulation of know-how and the human resources available when the focus is shared with one's neighbours. Something else that the Greeks have been sharing is the entrance technique, where the first and sometimes even the following vessels are bought from the second-hand market. This entrance technique requires less capital to be raised. This makes the market entrance somewhat lower, as it makes the capital costs lower, but raises the operational cost. The plain business model is usually a long-term charter (Triantafylli et al., 2010, pp. 634-5).

Operational costs are kept down with the help of family members in managerial positions or by dedicated companies. Special attention is given to the technical management of the vessels (Triantafylli et al., 2010, pp. 634-5). To understand why this is important, one should understand that the reason for the vessel's previous owner selling the vessel is its increased operational costs (Theotokas, 2007, p. 69). Theotokas opens it up even further, saying that on board the Greek ships, the operating costs (namely maintenance costs) can be low because the motivated crew feel loyalty to the family and because of the presence of the owners or managers on board the vessel. Even when the owner is not around, the shared practices of the compensations and promotions will tie the managers and officers to the company's interest. The loyalty and trust issues connected to the manning of the key positions go so far that it was even said that "These policies allowed shipowners to exert

moral pressure which proved to be a useful complement to supervision” (Theotokas, 1998, p. 312).

Triantafylli et al. (2010) also highlighted some softer or strategic-level elements affecting the success of the Greek shipping industry. Also, the long-run decision making and “the entrepreneurial philosophy”, covering values like “hard work, trust, persistence, and loyalty”, are set to explain the success of the Greek shipping and to have given birth to “the centralized management style” (Triantafylli et al., 2010, p. 635). Additionally, the fleet lay-ups and back sales were used as strategic tools – meaning that the vessels were sold and bought back according to the charter rate cycle and need for equity.

The meaning of the professional network is also highlighted, with *network* meaning the charterers, the owners, the classification societies, yards, investment banks etc. This core network was partly built between Greek families during the post-war period or even earlier; and it is still working, though of course evolving (Harlaftis, 2008, p. 93). Also, the information flow (Harlaftis, 2008, p. 93) needed to predict the market trends and the competence to interpret the weak signals is partly a capability of the network. This network is partly built personally and partly covered by inherited personal relations. So, the network sets the stage for the business interactions and for the constant information flow needed in shipping. In this way the network reduces the entrepreneurial risk (Harlaftis, 2008, p. 93).

The competence of the family firm’s management is home built, giving them the upper hand by both having a deep understanding of the dynamics of the branch and the ability to predict the top management’s preferred solutions. This helps maintain a uniform business culture. The relatives can also be used as resource pool, which makes the company less dependent on the official labour market. Even the salary managers are often relatives and/or owners (Theotokas, 1998, p. 312).

Also, the goals of the business might be more modest than in those companies solely going after profit. Sometimes the needed standard is just a basic income, which might give companies the endurance to survive the tough times. Ship owning is seen as a profession, not just as a means to gain profit (Theotokas, 1998, p. 312).

The article review lifted up multiple advantages, like the mentioned network, technical maintenance, shared management practice, low capital costs and long-run planning. For the next phase I place these elements into the Business Model Canvas to understand how they make up the actual business model, if it resonates with the customer requirements and if there are some opportunities to seize.

## 4.2.2 The business model of Greek shipping

After the literature review I composed the highlighted elements on one canvas to visualize and analyse the output. For that, I used the Business Model Canvas, covering the logic of how the creation, delivery and capturing of the value is done (Osterwalder et al., 2010, pp. 14-15). The aim of this presentation is to open up the strengths and weaknesses of the business model. As you can see from the table (Table 5), the output of the articles is more or less concentrated on the *Key Activities* and *Key Resources* while *Customer* and *Revenue Streams* sections are quite empty. The source of the information is of course academic articles, but the absence of the customer is somewhat interesting. It might make the business model very vulnerable, even when so-called asset play is used to generate profit at the second-hand vessel market. The model is strongly dependent on networks, both on the customer side and on the vessel maintenance side. Since the situation is changing, can this model survive?

<p><b>Key Partners</b></p> <ul style="list-style-type: none"> <li>- Network</li> <li>- Family members</li> </ul>	<p><b>Key Activities:</b></p> <ul style="list-style-type: none"> <li>- Transport service</li> <li>- Technical maintenance</li> <li>- Shared management practice</li> </ul> <p><b>Key Resources:</b></p> <ul style="list-style-type: none"> <li>- Information flow</li> <li>- Crew loyalty</li> <li>- Capital</li> <li>- Values</li> </ul>	<p><b>Value Proposition:</b></p> <ul style="list-style-type: none"> <li>- Entrepreneurial philosophy</li> </ul>	<p><b>Customer Relationships:</b></p> <ul style="list-style-type: none"> <li>- Networks (both inherited &amp; gained)</li> </ul> <p><b>Channels:</b></p> <ul style="list-style-type: none"> <li>- Second-hand bulk carriers</li> </ul>	<p><b>Customer Segments:</b></p> <ul style="list-style-type: none"> <li>- Bulk</li> </ul>
<p><b>Cost Structure:</b></p> <p>Less capital, high operational costs (→ second-hand vessels)</p>		<p><b>Revenue Streams:</b></p> <ul style="list-style-type: none"> <li>- Long-term time charters</li> <li>- Assets play (lay-ups, sell-backs)</li> </ul>		

Table 6 Greek shipping on a Business Model Canvas

It can be said that the Greek business model is of course changing as well. The handling of the running costs has been seen as key element in the success of Greek shipping, with Theotokas noting that running costs are a critical success factor for companies that managed over-aged ships of high operational cost, a main reason usually for their sale by their previous owners." (Theotokas, 2007, p. 69). It should be pointed out that in recent times the age of the Greek fleet is decreasing (Theotokas, 2007, p. 70), which might lessen the significance of this element and generate capital costs.

## 5. MULTIPLE CASE STUDIES - INTERVIEWS OF THE CARGO OWNERS

The methodology of the empirical part of the thesis was executed as multiple case studies, facilitated by the theoretical concept of channel role. The channel role concept was used as a theoretical part, in order to facilitate the preliminary assumptions, during the interviews as a frame structure and afterwards to help the interpretations. The interpretations were done in a thematic matter and together with the concept of channel role, as presented later on.

When setting the methodological course of the thesis I decided to use multiple case studies as a tool because of the limited amount of suitable informants and because of the complexity of the research topic. To open up the situation from the customer side, I decided to interview bulk charterers, meaning the cargo owners to find out their preferences regarding shipping companies and to understand the logic behind their preferences. When setting the methodological course for my master's thesis I chose to use the multiple case studies in a very instrumental way, where a theory was set a priori to facilitate the formulation of deductions to be tested with these interviews and later on to support some more general conclusions, based on both the theory and the interviews (Erikson, 2008, p. 124). The multiple case studies were gathered via semi-structured interviews. The aim of the case studies was to be able to use these semi-structured interviews to understand the actual preferences of transport service purchasers. The choosing process of the supporting theoretical concept is presented in a detailed way.

The key method selected for the research was expert interviews, focused on facts (Alastalo & Åkerman, 2010), where the information gathering was supported by a literature review and by a theoretical concept providing a framework for understanding and predicting the information. The expert interviews were executed in a semi-structured way; the questions were prepared and presented beforehand but they were open to be answered as the informants saw most fit and could be supported with additional questions (Koskinen, Alasuutari & Peltonen, 2005, p. 104). The questions were tailored for each expert and they are presented at the end of this paper. The reasoning behind using the expert interviews was grounded in the state of shipping in Finland; when gathering information about shipping there is only a limited amount of persons capable of commenting on this subject

and sharing their expertise about it, making them experts (Alastalo & Åkerman, 2010). Since the role of the experts is highly important for reaching such information and the amount of suitable informants is limited, the reliability of the interviews had to be validated by the literature research. The literature research was generated in two phases, though they were connected. Firstly, the search was done to understand what conversations are going on about entrepreneurial shipping or are relevant to it. This part was presented above. The second phase was in direct contact with the interviews as it was conducted to formulate a suitable theoretical frame to understand and validate the interviews. Both of these literature researches are used to triangulate, to verify by using multiple sources, the data gathered by interviews (Yin, 2014), as well as the fact the interviews support understanding the theoretical frame. Details of the literature research supporting the interviews and the theories about entrepreneurial opportunities will be presented in the later part of this paper.

The methodology within the interviews follows Yin's presented methodological framework for case studies as I use a certain "protocol of questions"(Yin, 2014). This means that I make a clear distinction between Level 1 questions, meant for informants, and Level 2 questions, meant for myself, these questions are meta-questions for those actually presented to the informants. For the further opening up of these levels, I present the following table.

<b>Level of questions</b>	<b>Question 5</b>	<b>Question 4</b>	<b>Question 3</b>	<b>Question 2</b>	<b>Question 1</b>
Focus and aim of the questions	Conclusions, recommendations	The entire study, including other sources	Patterns found in interviews	Case-sensitive questions	Personated questions

*Table 6 The protocol of questions (Yin, 2014)*

This means that when I try to understand the logic of the supplier selection (Level 2), I ask if they are using certain procedures or databases (Level 1). According to Yin, these personal questions (Level 1) should be "friendly" and "nonthreatening" and I should appear "genuinely naïve about the topic". They are in nature different to the questions at the following levels. The Levels from three to five are more connected to the analysing process of the collected data, and in connection to addressing the questions to the data. For example the Level three questions are those used for most importantly to adjust a theoretical concept needed for the theory driven interviews. This work I'm opening up later on, but the level three questions are not communicated to the informants as such but used as a tool for "introspection" when generating and analysing "the data set". The level four questions are those raised to be able to understand and analyse elements used later on to generate the business models. The level five questions are used for concluding the study for recommendations. (Yin, 2014.)

## 5.1 The used data – semi- structured interviews

The interviews were executed as semi-structured interviews, where the questions were sent to the informants beforehand. In total eight different persons were interviewed in six different interviews. Four of the interviews were recorded and written down for analytics, two of the others were documented by being written down during the interview and the memos were corrected by the informant. Four of the informants represented bulk charterers, two the vessel broker occupation and two represented shipping companies. In turn the bulk charterers represented four different bulk segments, ranging from cheap bulk to expensive break bulk. Oil products were excluded as they present a very different segment. The shipping company interviews were driven by questions about charter contracts and their role in ship investments. With the other informants, the cargo owner's requirements and rationalities behind them were discussed. The aim of the interviews was to understand what the requirements are and why they are required. Most of the interviews were over an hour long and loosely followed the list of questions that had been emailed to the informants beforehand. Three of the interviews were arranged at the informants' premises; one was held at my employer's premises; one was held over the phone, supported with email correspondence; and one was held at my and my colleagues shared employer's premises (the interview of colleagues).

No. of informants	Occupation	Duration	Recorded and written down	Corrected, written notes	Details	Cost of the cargo
1	Bulk, charterer	89 min	Yes		First a more detailed interview, cargo type: chemistry	Medium
1	Bulk, charterer	app. 100 min		Yes	The interview was recorded, but the memo was shared via email for corrections	Low
1	Bulk, charterer	App. 30 min*		Yes	*The interview was done via email and the results were gone through during a phone conversation	Medium
2	Broker	110 min	Yes			
1	Bulk, charterer	64 min	Yes			High
2	Bulk shipping**	93 min	Yes		**The former occupations of the informants were in bulk shipping	

*Table 7 A table of the interviews*

The analysis of the interviews was based on written-down interviews and two memos, and a close reading of them. The close reading was supported by the theoretical frame, set partly beforehand. It was only set partly because the two first interviews were executed before changing the theoretical frame from Krailijc's model to the concept of channel role. The details of this process are covered in Chapter 5.3. The theoretical models were used to find both shared and differing answers and opinions regarding the nature of bulk

shipping, service provider requirements, and their reasoning and future trends, taken together with the characteristics of the ongoing situation.

## 5.2 Reliability and validity

The questions of reliability and validity are the most important in any academic study; for me they are strongly connected to my epistemological standpoint. When presenting an epistemological standing as an understanding of the truth values of the interviews, I believe that there is such a truth value in an interview. This is because, in my understanding, the informants can be wrong and can alter the facts, as well as present more complex facts or state the situation with either more or less talented wordings or give either a more or less detailed and fruitful description since people have varying talent at expressing themselves in words. Put shortly, an informant can either throw more light on the facts or do the opposite of this and be misinformative during the interview (the process of sharing knowledge between interviewer and informant). Giving such a truth value to shared information is built upon my epistemological standpoint of critical realism. Critical realism is well established in Finnish science of economics (Koskinen, Alasuutari & Peltonen, 2005, p. 35), which supports my standing. After saying all this about the informants, I do also understand that as an interviewer I have a certain role during the interviews, and the aspects and facts that arise are also dependent on my interests and background assumptions, as well as on my background and work history in the industry.

Since the epistemological standing is such a vulnerable one, I have chosen multiple strategies to tackle it. For achieving the validity – the actual capability to ask the right questions and be able to answer to them (Golafshani, 2003, p. 599) – I have been working on my hypothesis and my questions, together with gathered data, throughout the whole thesis. The hypothesis had been evolving and focusing together with the cumulation of the understanding of the topic. Another quality element, reliability, can be divided into *repeatability* and *internal consistency* (Golafshani, 2003, p. 599). I have tried to tackle these issues in particular by using multiple informants and by using the same set of questions (included to the end of this paper) in all but one interview. Both validity and reliability are also vulnerable to more concrete mistakes. The most obvious sources of distortions should have been avoided by the literature research, giving both background information and the conceptual framework. The qualitative research has, of course, its typical vulnerabilities.

The typical negative distortions for the expert analysis are as follow: enforcing the best industry standards, even when this is not the actual state of the things, and professional solidarity towards others, which can prevent negative aspects from being raised (Alastalo & Åkerman, 2010, p. 384). Also, a challenge can be the “standard speech”, representing the company’s official message and not the informants’ own interpretations or reflections (Mykkänen, 2001, p. 119). Company policy can direct communications, even in answering less official questions, through the interview (Koskinen, Alasuutari & Peltonen, 2005, p. 121). On the other hand, the informant can give indirect hints without truly supporting the information given by such insinuations (Alastalo & Åkerman, 2010, pp. 385–6). The informant can also use the interview as a way to drive the company interests into the research in order to find more support for interests (Koskinen, Alasuutari & Peltonen, 2005, p. 121). These elements can be found in the interviewer as well and can be expected from the interviewer by the informant. It should be noted that the elements that arise in an interview have a dependent relation to the informant’s personality, the informant’s status in his or her organisation, the practicalities of the interview situation and the informant’s understanding of the role and the actions of the interviewer (Alastalo & Åkerman, 2010, p. 381).

To overcome such challenges, the most important tool is triangulating the evidence with other sources (Yin, 2014). This is done by several literature researches, as presented above. The reliability questions which Yin raised are somewhat similar to those presented above. In part, they are more practical, like the informant deliberate misleading the interviewer, poor recall, poor articulation and similar mistakes, partly generated by the interaction between the interviewer and the informant (for instance, the reflexivity phenomenon). Phenomenon happens between interviewer and informant when their opinions come together (unnoticed if not paid attention to) (Yin, 2014). Also, the natural human wish to look good might overpress well-established conventions like significance of “the safety culture” or “vessel’s ice class”. Concepts that are agreed on at a theoretical level might not have the same importance on real supplier choice. For testing the informants’ reliability and one’s understanding of things, Yin recommends triangulating the evidence with other sources (Yin, 2014).

The triangulation of the interviews is done firstly by the systematic literature review and secondly by the relevant theoretical concept, chosen from appropriate literature.

### 5.3 Theory-driven interviews: The heuristics of choosing a suitable theoretical concept

As presented above, I decided to support the interviews with a suitable theoretical concept. I had first chosen the Kraljic matrix (1983), a classical buy-seller relationship model for supporting purchasing segmentations and management. The matrix holds a certain role in the supplier management discipline and, further, it is still gathering references and more detailed analyses in connection to more accurate problematics. For example, the version of the Kraljic matrix chosen by Caniëls and Gelderman (2005) sees the positioning of the supplier to be dynamic. The purchaser is trying to affect to the supplier's placement in between the quadrants, as well as the fact that the supplier itself is trying to modify (or rather maintain) its status (Caniëls & Gelderman, 2005).

At the starting point of the data collection the matrix seemed to be able to visualize the shipping industry's placement and the need for change. For example, according to the mentioned BIMCO article (BIMCO, 2016) and the generated overall understanding of bulk shipping, the positioning of bulk shipowners is in the left downmost corner of the Kraljic matrix (see Figure 6). Shipping itself is mandatory for transporting cargo, but there are many suppliers and the prices are down. According to this understanding I made the hypotheses that when the supplier is placed in the left downmost corner of the Kraljic matrix, there is "no reason" to make excessive investments. This partly explains the success of Greek shipowners, with their business model having old and sometimes substandard vessels, especially in the past. But now the industry is suffering hardship because there are too many vessels and great investment needs due to the new environmental regulations. At the same time, there are hardships for any vessel owner having a long-term loan to cover ship investments. The only solutions available would be direct customer backing or long charter contracts, as the interviews will open up. There is still the problem that even when the charterer supports the investment or make's the long-term contract, at the moment charter rates are at rock bottom. Making the long-term contracts is not reasonable for the shipowner.

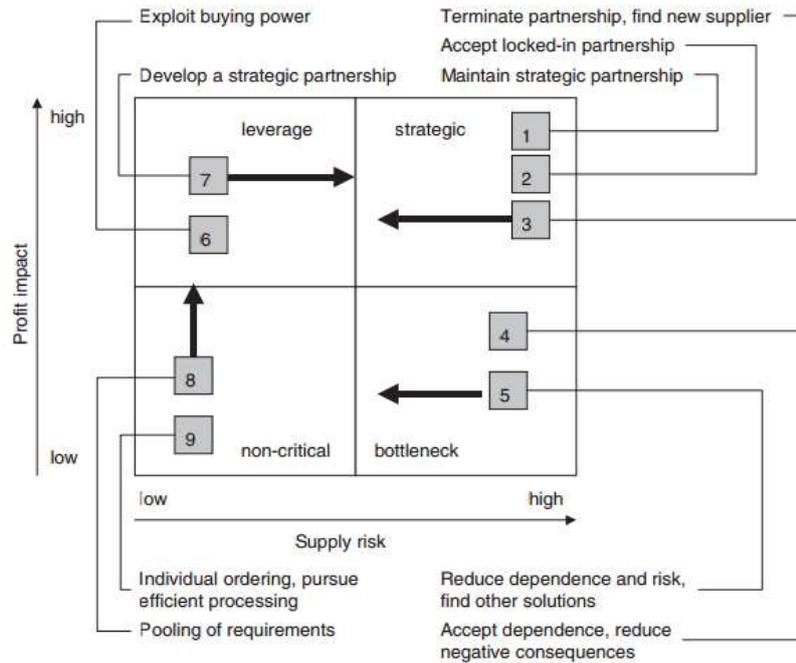


Figure 6 An overview of purchasing strategies for all portfolio quadrants (figure captured from Caniels & Gelderman, 2005, p. 143)

The unexpected hardship was the finding that, in practise, the chosen theoretical frame was not compatible with the informants' output. The reality in Finland was not as clear as I had anticipated; the bargaining power of the charterer was not as strong as I had thought.

It was not beforehand, but within the interviews, that the incompatibility of the matrix was raised. The output from informants was not in line with the frame given by the used theoretical concept, not even when raising less subtle questions. This was seen as a major flaw, since the methodological frame was indeed theory driven - the theory should facilitate the understanding and evaluation of the input. But nothing of what was extracted from informants was like the elements of the model.

But after that, a more favourable theoretical concept was identified. This happened when studying internationalization and particularly the role and elements of distributor relationships. When examining further the performance required from distributor and studies related to them, the concept of channel role (Skarmeas et al., 2008; Kim, 2000) was found and identified as compatible. This concept worked simply and elegantly - either you meet the expectations of your channel role and the goods move on, or you do not. The problematic part of the concept was that most of the articles did not define the concept as such but "only" applied it. I then decided to seek for more background information on the concept. So, what is behind the concept of channel role and how should this be taken into consideration?

In the following chapters I try to open up the history of the concept, its suitability to meet the case studies interpretation needs and I raise some further questions to be addressed in later research.

### 5.3.1 The used supporting theoretical concept: Channel role

For gathering information about the channel role concept's history, a review of suitable articles was made. The articles were chosen according to two elements: the amount of citations and the presence of the concept of channel role within the article. The literature review was lighter than when trying to identify relative articles systematically for the core of the thesis, since the concept is well known and established. The review summed up three major players in the field of channels.

Firstly the channel has a long and elaborated status in economics and particularly in marketing, but the concept is also part of the scope of logistics and supply chain management (SCM) in a very established way (as will be analysed in a more detailed way later on).

Logistics might claim to be the first field one should start with, because it is a well-known fact that French military strategists invented the concept of logistics during the 19th century (Lummus et al., 2001) when they did not only concentrate on the "theatre of war" but also considered how to move and lodge the soldiers and their belongings in order to reach it (p. 426). Second step took some time - more than hundred years later economists started to talk about logistics. At the start of the twenty-first century distribution channels were already a "central feature" for marketing (Bucklin et al., 1996). On the other hand, the third rival owner of the concept -SCM - can be considered to have come into use in the 1980s (Croom et al., 2000).

SCM can be linked theoretically to many different disciplines, like "industrial economics, systems dynamics, marketing, purchasing and inter-organisational behaviour" (Croom et al., 2000, p. 68). Logistics, on the other hand, can be connected to "marketing, finance and manufacturing" (Langley, 1992, p. 1). Connections to such a variety of subject areas can easily open up why the concept of channel itself is hard to formulate. Croom lists the branches of logistics and, within its realm, counts both the distribution channel management and the physical distribution when analysing the current (2000) state of SCM literature (p. 70). The problem with the SCM theories represented is that the concept of channel is only applied on a network level and my interviews cover "the dyadic level" (p. 71), referring only to the relation between two partners. It seems that the SCM concept of channel is too high in the hierarchy to cover the actual decision making of a purchaser.

Logistics, on the other hand, concentrates on the actual movement of goods, and the discipline furthermore stretches to the implementation needed to generate the flow of goods (Lummus et al., 2001, p. 426). It is even pointed out that logistics is sometimes reduced to mainly refer to transportation actions, making logistics refer mostly to the shipping (p. 427). When differentiating logistics and SCM, Lummus et al. (2001) defining logistics only as a part of SCM. SCM covers the actual logistic flows and strategic management, whereas the logistic function involves planning and managing action points, like shipping and delivery (p. 431). But, when talking directly about the logistics discipline, the authors refer to logistics as a comprehensive and strategic supra-system that

creates customer value (Langley, 1992, pp. 1–2). Furthermore, they include SCM as one of the logistic activities, together with transportation and services. With this it is logistics which manages the channels of supply and distribution (pp. 3–4). It is notable that again when discussing channels, the practical level is diminishing

Within marketing, the most interesting use of the channels concept is covered by the distribution channels used in conjunction with industrial markets (since the very start of marketing according to *The Marketing Book* (Wensley, 2008, pp. 55-58)). From marketing we finally found a definition of (distribution) *channel*: “The distribution channel is a vertically oriented network of organizations that provides marketing service outputs to facilitate end-user consumption” (Bucklin et al., 1996, p. 74). Since the considered discipline is marketing, the channel theory is strongly connected to consumers (industrial or private) and the level of the detail is at the network level. Anyhow, Bucklin divines the channel structure horizontally, having two parts: a commercial part and an end-user part. The end-user part sets the requirements for the commercial channel service level, optimizing the commercial channel’s workload simultaneously with the commercial sector, which tries to keep the provided service level in line with the cost structure (1996, p. 74). This is in line with the interviews conducted, but the hardship is that the distribution channels are more or less analysed from the retail perspective (the referenced articles analyse phenomenon like assortment). From marketing a workable definition can be extracted, but not much more as yet. This might of course be because the very promisingly named “theory of channels” was more intervening with the distributor channel than the supplier channel. There are of course studies on channel theory that address supplier channels, but not in such volume as those about distribution channels. This might of course be the sum of different factors, like distribution channels’ studies being shared by multiple journals and disciplines (like SCM and logistics). There is also one more explanation.

If, as it seems, the articles do not support the use of channel role in as detailed a manner as is the case for chartering, why does it resonate so well with the actual input from the field? On a personal level, I had some rough nights before I come up with a hypothesis. I think the charterers are placing themselves in a role (or understanding their role) as the gatekeepers of the supply channel. They are placing themselves as a part of the supply channel and rationalising the needs of the organisations via this mind-set. So, when explaining the rationalities and reasons behind the purchasing decision the channel is not manifested in one act of chartering, but in the mind of the purchasers of the logistic services.

### 5.3.2 Where to move with the channel?

Also other authors support this hypothesis, of cargo-owners acting as gatekeepers of the supply channel, rather than charterers of individual vessels for singular trips. The importance of transporting services and their role in distribution channels is raised specially by Hammervoll et al. (2010). According to Hammervoll et al. (2010): "Failing to recognise that distribution is a critical part of the marketing mix means that transport is treated as a commodity that is purchased in a transactional manner, rather than being managed as an essential function in the supply chain." (p. 1121). Hammervoll agrees about the absence of the transport actions in the realm of the channels. And Hammervoll also raises the point that the more exact definition of distribution could provide economical benefits, considering the remarkable amounts of currency used for shipping (2010).

From my point of view the following task would be to (also) rephrase the distribution channel in order that the retailers are excluded and the focus is on the actual transport – metered in miles and tonnes – as Hammervoll (2010) also indicated should be done. Already, alike endeavours can be found:

By channel, we refer to an organised network of institutions that form the combined physical and non-physical path taken by goods and services as they move from original supplier to final consumer. However, in the context of this paper, the scope of the distribution channel is reduced to active members of the international shipping and logistics industry, that is, shippers, ocean carriers, ports, agents and intermediaries. (Bichou & GL Bell, 2007, p. 35)

Unfortunately, the *Maritime Economics & Logistics* journal's standards do not support the most formulated use of the references. The article referred more to articles about shipping lines and port facilities than to suitable articles that would lay the ground for channel performance, leaving this interesting definition standing alone. Even when stating that "the channel management" is interpreted in a marketing context, a reference to such articles were not to be found. Could it be that the marketing understanding of *channel* is so clear on every level that there was nothing left to be clarified?

As presented above, this interpretation is somehow in line with the findings of this paper where *channel* is a term widely used and perhaps more or less understood alike by all.

### 5.3.3 Channel role performance

As presented before, the channel role can be fruitfully amended to correspond with the requirements of the shipper or rather cargo-owner. When analysing what are the differing capabilities making variance between suppliers in more detail, one has a short list of features. Together with the Kraljic matrix, I agreed on the few key capabilities required from shipping company beforehand. According to Andersson, Coltman, Devinney and Keating (2011) the four key elements the buyer recognizes when choosing a third-party logistics provider are: “reliable delivery performance, price parity with other providers, being among the industry leaders in customer recovery and not being difficult to deal with” (Andersson et al., 2011, p. 108). With these terms I was more successful; they both support the channel concept and were supported by the feedback from the interviews.

When analysing the channel role literature in greater detail, it should be pointed out that the logistics partners’ and the exporting partners’ role performances are not, in most cases, separated from each other. This is in line with what we have learned about the visibility of shipping above. The perception of the exporter is also strongly affected by the actual transportation executed in the channel and the total success of the distribution process. In the literature on marketing channels, the performance characteristics affecting the co-operation and the relationship of the channel parties are: trust, commitment, adaptation and, for B2B especially, co-operation and long-term orientation (Skarmeas, 2008). The classical distribution channel literature is, on the other hand, focused on interfirm power and its use (Kim, 2000). This means that the study has been more connected to the elements which Kraljic’s matrix is representing, merely forcing (rather than stewarding) the counterparty. Kim (2000) turns this classical setting into another, saying the trust and confidence between *both* parties affects the capabilities of the channel. He is referring to the *dyadic* relationship between the parties, where distribution channel relationships are named an *exchange partnership*; this partnership builds on trust in the partner’s word and his or her interest in fulfilling his or her obligations (Kim, 2000, p. 390). Skarmeas (2008) moves on with the elements of channel performance, as Kim (2000, p. 402) had hoped. The standpoint from which Skarmeas (2000) writes combines elements from the studies of marketing channels with the basic question of the distribution channels: What are the elements affecting the performance of the distribution channel? Role performance is defined by two elements: (1) how well the party is executing its obligations (meaning its actual channel role) and (2) how well the party is performing when compared to other firms (Kim, 2000; Skarmeas, 2008).

The elements of performance lifted from the articles can be divided into four groups. The first group is titled *expected behaviour*; it covers the exporters’ (in this case, rather, the cargo owners’) expectations of the distributor (the shipowner). They should react and work as anticipated – performing “certain behaviour and actions” (Kim, 2000, p. 27). This can, of course, be complicated because the cultural dimension generates “different management styles and practices” (Kim, 2000, p. 27), but this can be tolerable to a certain level. The second group is called *adaptation*. Both Kim (2000) and Skarmeas (2008) highlight transaction-specific investments and Skarmeas (2008) directly refers to the product

adaptations executed to match products to particular requirements (Skarmeas, 2008, p. 27). This can obviously cover the modification of services (as is the case in shipping). The third group are the elements directly and solely in connection with the perceived role performance - reliability, consistency and continuity when supplying the services and the actual execution of them at an acceptable level. Also, price parity with the industry is part of role performance (Skarmeas, 2008, p. 27). I call this group *channel role*, as it covers the core of the service needs. The last of my groups is called *shared goals*; the elements falling under this title are extracted from the literature: helping and supporting the other party to meet their goals while simultaneously working hard for one's own (channel role-connected) goals and minding the (end) customer (Skarmeas, 2008, p. 27). This grouping, with more detailed elements, is presented below in Table 8.

EXPECTED BEHAVIOUR	<ul style="list-style-type: none"> <li>- "Not being difficult to deal with"*</li> <li>- The "distributor expects certain behaviour and actions"</li> <li>- The "existence of different management styles and practices between the international exchange partners"</li> </ul>
ADAPTATION	<ul style="list-style-type: none"> <li>- Transaction-specific investments</li> <li>- "The service provider is undertaking considerable adaptations to match product offerings to the particular requirements"</li> </ul>
CHANNEL ROLE	<ul style="list-style-type: none"> <li>- "Reliable delivery performance"*</li> <li>- "a reliable, continuous and consistent source of supply"</li> <li>- The service provider "actually carries out its channel roles in comparison with the industry average"</li> <li>- "Price parity with other providers"*</li> </ul>
SHARED GOAL	<ul style="list-style-type: none"> <li>- Both assisting counterparts in attaining their goals in order that they reciprocate and commit to its overseas supply relationship</li> <li>- "Being among the industry leaders in customer recovery"*</li> <li>- The "exporter works hard on its behalf" and supports also service providers' efforts</li> </ul>

Table 8 Channel role performance – the key components (column two\* following: Andersson et al., 2011 p.108; Skarmeas, 2008, p.27)

The channel role should be met constantly and reliably, without mitigations, and with performance and price parity matching the industry average. The behaviour, management styles and actions should be as expected and anticipated. The customer needs should be met by adaptations and investments if necessary. Also, customer investments should be seen as a part of the relationship building. The customers' goals should be supported and the relationship should be maintained with hard work. By fulfilling these channel role performance expectations, the attractiveness of other suppliers should be diminished.

### **5.3.4 Using the concept for setting the theoretical frame for interviews**

I started this chapter and my methodological endeavours with one theoretical frame to help predict and analyse the interviews of cargo-owners. The theoretical frame was later substituted by another, certainly more diverse, concept. After understanding the immanent nature and the long history of the concept of channel, it could be stated that the concept has substantial power to explain the decision making of the buyers.

The buyer's role in a supply channel in shipping can be observed by the one act of logistics - chartering a ship. But behind the decision of this one act, there is strong understanding of the dependencies and drivers needed in the channel role performance of this very act. In interviews the rationalities behind a purchase decision were opened up with terms understandable in connection with channel role performance. The reason for the applicability of the term "channel role performance" and the almost total absence of distribution-level articles were explained by the buyers' wider understanding and by applying this information about the "big picture". In other words, the cargo-owner when placing herself in the role of executing the strategic management of a supply chain, the logistic act - chartering - was done according to rationalities of the total channel flow. That is why the reasoning behind chartering was seen and understandable via concept of channel role performance.

In recent writings the question of chartering as a function that is meaningful enough to be analysed as an individual part of the chain has raised support for my findings. And in the future it could be anticipated that it will affect the management ethos of charterers - the buyers of transport services. Perhaps the purchase decisions of the future could seek for more variety in the reasoning and rationality, and hence open up new advantages or business opportunities for both parties?

## **6. INDUSTRY PREFERENCES IN SUPPLIER SELECTION: THE RESULTS FROM INTERVIEWS**

The results from the interviews were divided into two different sets. The first set is about the general perception of the situation – like the low charter rate and the interest or ability to make long-term contracts – and the role of the port facilities. The latter divided the group, while most of the informants explicitly mentioning the low rates. What was also shared was the limited number of potential providers. The second set is listing the elements of channel role performance identified in interviews. Elements totalled 18 features varying from the age of the vessel to the availability and long list of adaptations, like ice class. So after presenting the general perceptions, I will go through the expected role performance – the channel role and its elements, according to the interviews – in more detail.

The first set was constructed of the elements having an effect on the chosen contract type. The elements uplifted were mostly dependent of the type of the bulk cargo: the value of the cargo, the consistency of the traffic between the certain ports and if the cargo was moving between the charterers' locations or just to the customers. The dependents of the first set were logically understandable. If the value of the cargo is low and the traffic is irregular, the interest to invest in the shipping company, meaning agreeing to a long-term contract, is non-existent. On the other hand, if the traffic is more or less regular and the value is high, even ten-year contracts can be reasonable. This variance could be found from the interviews.

The other general element which can easily be extracted as a theme from the interviews was the role of the ports. The actual number of ports, the active hours spent in ports (how many shifts), the pace or rhythm of a vessel visiting ports (which varies a lot between weekdays) and the size of the ports all affect ships and shipping. (For detailed comments by informants see Table 9.) The used ports and their operational profiles affect a vessel: the port's size, the number of ports, the active working hours of ports and the port costs paid by them. The interviews highlighted the number of Finnish ports in strongly different tones. The number of ports in Finland was partly seen to be too high, while others saw the concentrating trend as a threat. This seems to be strongly connected to if the cargo-owner

had "a port of its own" or not, or if the traffic was regular or not. Since the number of ports is highly political question, I only wish to point out that inside the industries there are differing opinions, perhaps accumulating mostly from the nature of their trade.

Type of traffic	Cost of the cargo	Contract length	Comment on port facilities, in original phrasing (translation follows)	Comment on charter rate, in original phrasing (translation follows)
Regular	Medium	Up to 10 years	<p>"Joku pieni niemennokka Tanskassa, niin sinne nyt ei kauheesti isoilla laivoilla viedä", "laivakoko kasvaa niin... Mutta sitten taas mejän satamat kasva yhtään tai."</p> <p>("You cannot export to some small peninsula in Denmark with big vessels", "vessel size is ever growing, ... but simultaneously, our ports are not growing.")</p> <p>"Jos tavaravirrat keskitetään Suomessa, ei lähimpään vaan isompaan satamaan, se johtaa väistämättä kilpailuaseman heikkenemiseen. Meidän etu on taatusti, että vientiä pystytään harjoittaa kustannustehokkaasti lähimmän sataman kautta."</p> <p>("If the flow of exporting goods is only concentrated to the few big ports, not to the nearest, it will inevitably harm our competition status. For sure, it is in our interests that exporting can be done cost efficiently through the nearest port.")</p>	<p>"Rahdithan on ollut, ihan saakelin huonoja."</p> <p>("the charter rates have been damn low.")</p>
Irregular	Low	Spot	<p>"Sataman kannalta päivät ja viikkojen työkuormat ovat hyvin epätasaisia ja jos sen saisi viikottain tasaiseksi niin paljon lisäkustannukselta säästyttäisiin."</p> <p>("Seen from the port's point of view, it would greatly lessen the additional costs if the workloads at the port could be evenly distributed for the week – now the load varies a lot within days and weeks.")</p>	<p>"-- nyt on ollut vaikeita vuosia varustamoille.. .Tietyt varustamot ovat menneet konkurssiin ja ajat ovat niin surkeita, että monet ovat ajautuneet pankin syyliin."</p> <p>"It has been a tough time for the shipping companies. Some have been bankrupted and times are so tough that many have been drifted into the bank's arms."</p>
Regular	Medium	Up to 5 years	<p>"Me oon ite tehty, hyvin paljon sitä samaa satamaverkoston optimointia. -- Suomesta, varmaan viimeisen 15 vuoden aika -- teollisuuskapasiteettia kadonnu paljon pois, niin se satamaverkostokin on ollu ylimitotettua."</p> <p>("We have done a lot of the optimization of the port network by ourselves. In Finland, for the last 15 years, the industrial capacity has been diminishing , so the port network has also been excessive.")</p>	<p>No comment</p>
Regular	High	1- 15 years	<p>"Me oon ite tehty, hyvin paljon sitä samaa satamaverkoston optimointia. -- Suomesta, varmaan viimeisen 15 vuoden aika -- teollisuuskapasiteettia kadonnu paljon pois, niin se satamaverkostokin on ollu ylimitotettua."</p> <p>("We have done a lot of the optimization of the port network by ourselves. In Finland, for the last 15 years, the industrial capacity has been diminishing , so the port network has also been excessive.")</p>	<p>"Varustamokenttähän on ollut viimeiset, kymmenen vuotta äärimmäisen heikossa, hapessa...rahtitulo vaan ei ole, riittänyt kattamaan niittä kustannuksia."</p> <p>("Over the last ten years, the shipping sector has been in extremely bad shape ... the charter rates have not been up able to cover all those costs.")</p>

Table 9 DATA SET 1: Contract length and the value of cargo - presented in connection with comments to the port facilities and charter rates

## 6.1 Not too many players

The main concerns brought up by the informants were connected to the Finnish-bound traffic and can be understood by the main element of having enough and suitable providers of services, with reasonable prices (for details, see Table 10). It was stated that there are not “too many players” which were doing business and fulfilling all the regulations. Most of the international tonnage is not suitable for Finnish needs: the vessels do not have the necessary ice class, there might be problems with ILO (International Labor Organisation) questions, they are unnecessary big and, most importantly, they do not settle here for longer period of times (which is needed for generating trust between parties and also for maintaining the price level, since sailing here for one cargo would not be economically feasible). It was also worth mentioning that most of the informants stressed the fact that there should always be multiple suppliers available in order for them to keep the supplier from having too much power over the buyer. It seems that the customers expect to have a certain level of extra capacity around in order to be able to hold the negotiation power. Of course, these kinds of reserves do play a role in costs, but this was not reflected during the interviews. One would, of course, ponder how this extra vessel capacity can be kept floating – will the vessels be renewed? How would it be possible or economically feasible? (For detailed comments by informants see table 10).

The charter rates were observed to be notably down (see table 9), but this was more strongly commented on by those who were not in long-term contracts. The downturn of shipping received empathy, but not much more. Low-level vessels’ maintenance and crewing solutions were mentioned as concrete evidence of the money shortage. It was also pointed out that those who had invested during the uptime cannot even sell their ships because of the vessel’s value today. There is no option but to carry on. The market also sees bank-operated ships as just buying some time and violating the pricing even further. On the other hand, the vessels’ ages were also highlighted as a risk. As well as the fact that smaller vessels were even older and had less probability of being renewed by a similarly sized vessel. This was seen as a problem since “the ports were not growing any bigger”. But why build a small ship if a big one costs the same and can generate multiple incomes when bigger loads are available? On the other hand, the extra capacity of vessels was only mentioned in negative terms – as a cause for needing more bulkheads and as a possible risk for cargo moving.

After having presented the general impression of the interviews above, I will now analyse the second set of findings, together with the frame provided by the theoretical concept of channel role performance. At the table 10 you will find the comments by informants connected to the elements of channel role performance.

PART OF THE CHANNEL ROLE PERFORMANCE	PRACTISE, ACCORDING TO THE INTERVIEWS	FROM THE INTERVIEW firstly in the original phrasing (translation follows)
EXPECTED BEHAVIOUR	Commitment to the code of conduct	"supplier code", "code of conduct"
	Fulfilling MLC regulations	"nämä ITF (International Transport Workers Federation) asiat on kunnossa" ("these ITF things are met")
	Accepting the BIMCO clauses	"meidän omat lisäehdot" ("Our own additional clauses")
	Governance of the cargo continuum (previous cargo)	"Aluksen kolmen viimeisimmän lastin tulee myös olla laadultaan sellaisia, että ne eivät aiheuta riskejä", "edelliset lastit" ("The vessel's three last cargoes should be by nature, so that they will not generate any risks", "the previous cargoes")
	Vessel age / insurance suitability	"ikä - on yli 30 vuotta ei voi saada edes lastivakuutusta", "taitaa olla 30 joo. Mut siitähän saa poikkeuksen jos pystyy näyttämään et se laiva on kondiksessa", "ette saa rahdata laivaa joka on yli 20 vuotta tai 25 tai 30 vuotta" ("If the vessel age is over 30 years old, one cannot even get cargo insurance", "Yes, it is some 30 years. But even in that case you can receive an exemption if you can demonstrate that the vessel is in good condition.", "you are not allowed to charter with a vessel with a vessel age exceeding 20, 25 or 30 years old.")
ADAPTATION	Vessel size (small)	"noi pienet laivat 3 000", "pienin laiva - - siinä 1000 - 2000", "vastaanottajat haluis tietenkin mahdollisimman pieniä eriä aina satamaan" ("those small vessels, 3000", " a small ship – around 1000–2000", "the receivers would of course want as small an amount as possible to the port")
	Cargo-specific investments: bulk heads, cranes, side doors	"lastitila voidaan turvallisesti rajata välilaipiollilla", "lastinkäsittelyvälineistö - - niinku sivuporteista", "A60 bulkheadia konehuoneeseen", "ilmanvaihto siel ruumassa" ("There should be movable bulkheads available in order to restrict the cargo hold safely", "Cargo handling equipment ... like side doors", "An A60 bulkhead against the machine room")
	Traffic area	"laivat jotka liikkuvat täällä säännöllisesti", "Suomeen sitoutunutta tonnistoa", "tosissaan siinä bisneksessä mukana ja pitkäaikaisesti", "kenen, muuhun liikenteeseen se meidän lasti sopii" ("Vessels that are regular visitors", "Finland-bound vessels", "long-term commitment and serious commitment to the business", "Our cargo should be compatible with the general traffic area of the provider")
	Filling the traffic area requirements: ice class, bunker, ballast water treatment	"1A talven kuukausina", "painolastivesienkäsittelyjärjestelmämuutoksia", "jos sul on jäävahvisteinen laiva niinsä kulutat 50 prossaa enemmän bunkkeria", "me tarvitaan sitä jääluokitettua tonnistoa", "laivalla on jääluokka. --tämmöiset säädökset ja esimerkiksi tämä painolastivesijärjestelmä" ("1A during the winter months", "modifications to the ballast treatment equipment", "If you own an ice class vessel, your bunker consumption is 50% more", "We need ice class vessels", "The ship is has an ice class. These regulations and this ballast water handling system, for example.")
CHANNEL ROLE	Availability; fleet management	"halutaan siten varmistaa sitä että meillä on, kapasiteetti ja oikeenlainen kapasiteetti aina tarjolla", "yhtään lastii en ole nähnyt millä ei olisi kiire" ("We want to be sure that we always have the needed capacity available", "I have never seen a cargo that was not in a hurry")
	Price	"edullisia kuljetuksia", "tottakai hintataso", "rahdithan on ollut ihan saakelin huonoja", "Kyllähän rahdinkin pitää olla oikea"

		("low-cost transport", "naturally, the price level", "charter rates have been damn low", "Also the asked charter rate needs to be right")
	Box-likeness	"selvät boxit", "laivan ruuman pitää olla, boksi, sanotaan ihan laatikkomallinen – kenkälaatikko", "mahdollisimman oikeankokoinen suorakulmainen laatikko" ("solid boxes", "the cargo hold needs to be a box – box shaped: a shoe box", "a suitably dimensioned square box")
	Tight hatches	"tuotekuljetuskriteerit", "testataan luukkujen tiveys", "ruuman kunto" ("product transport criteria", "testing the watertightness of the hatches", "The cargo hold's condition")
	Promptness	"toimitusvarmuus", "jos me feilataan yhdellä päivällä siitä A:sta B:hen, ni se on valtava huuto", "Ei voida varastoida" ("supply reliability", "if we fail for a day from A to B, there will be so much shouting", "can not be warehoused")
SHARED GOAL	A clean cargo hole	"lastitilan tulee olla riittävän puhdas, kuiva ja hajuton", "ruumiin pinnat- vapaa ruosteesta ja kaikesta tuoksusta ja muutenkin täysin puhtaat", "ruumiin tarkastukset", "aina laivan ruumat pitää pestä ja siivota kunnolla" ("the cargo hold needs to be clean enough, dry and without any smell", "The cargo hold surfaces need to be free from rust and smells and must be, in every way, totally clean", "cargo hold inspections", "the cargo holds needs to be washed and cleaned in a decent manner")
	A well-maintained vessel	"meijänkaluston.. pitää olla hyvässä kunnossa", "mistä pyrkii tinkimään - - se on kunnossapito", "ehkä vaikeempaa motivoida kippari tai miehistöä pitämään huolta laivasta" ("our [chartered] vessels need to be in good shape", "where they are able to save money, that is the maintenance", "It might be harder to motivate the master or crew to take care of the vessel")
	Crew competence	"vaatimuksena -- että on pätevä" ("it is requested that the crew is competent")
	Understanding the local conditions	"... tuntevat jäät ja olosuhteet", "ku ei ne ymmärrä talvi-ilmaa" ("... are familiar with the ice and conditions", "because they do not understand the winter conditions")

Table 10 The elements of role performance

## 6.2 The elements of channel role performance, according to the interviews

After presenting some more general dependents of bulk ship chartering, I will go through the parts of the supply channel performance in detail and observe what they mean in

context of bulk shipping. When starting the analysis of the requirements and their nature, they were not too easy to grasp. The strongest requirements were for the box-likeness for the cargo holds watertight hatches (also in practise), the previous cargo types, bulk heads and vessel's ice class. After further analysis, the commitment to the traffic area covering Finland was also elevated, as well as some criticism of the maintenance work, the age of the vessels and seamanship/crew competence. I have concluded the findings in the table below (Table 10).

Excluded from the table 10, the element of the competition was strongly highlighted, as already mentioned in the chapter above. Facilitating the competition can be seen as channel management, at the metalevel above actual channel role management. Supporting the competitive situation and keeping it up was one of the most highlighted concerns. It was explicitly brought up: "*Siitä pidetään yleensä huoli että kilpailu säilyy.*"<sup>5</sup> The contracts are shared by two to three different companies in order to be sure that situation will not turn into a monopoly where the shipowner is "directing the production". Consolidation, as a trend, was also mentioned.

Under *Expected behaviour* there are elements which cannot be negotiated, the shipowner had to agree on code of conduct or extra clauses of BIMCO in order to be able to come to an agreement with the cargo owner. The age of a vessel is something that the conversation pondered. The insurance companies do not give insurance for older vessels, but since there are no suitable new small-scale vessels, this policy rule has been stretched. But basically this is also not an open question for conversation. Adaptation was something that I was a bit surprised about; there is actually a lot of adaptation needed in order for vessels to be suitable for transport services in Finnish waters – the ice class of course, but there is also a need for a lot of the environmental regulations that the EU is driving as an early adopter. The actual tendency to operate along the Finnish coast was also set a priority; according to the charterers, the market for suitable vessels was not as big as expected. Vessel size was again elaborated, but there were also some more classic adaptations – like bulk heads, side hatches or fire safety regulations needed for certain type of cargo – that were needed in order for a vessel to suit their needs. At the very core of the concept, the narrowed channel role was simplified to availability, price, box-likeness, tight hatches and promptness. Unexpectedly, promptness did not receive too much attention; it was more as if when the vessel has got to port, things took their own path. The shared goal was something that was in place in scale. Sometimes the actions of the crew were not in line with a shared goal, or the shipowner had not been keeping the vessel well maintained and the hatches were not watertight. In such cases, there was no shared goal any more. The low day rates have been diminishing the service rate (the shared goal) down to survival mode.

---

<sup>5</sup> "You take care that the competitive situation is maintained"

## 6.3 The business model, according to the interviews

When further analysing the elements which seem to be part of the business model, I found I could produce the business model as it represents itself to the charterers and connected groups, opening their understanding of the charterer's preferences. It is strongly driven by the costs and the adaptation to the traffic area; other elements were not considerable as drivers.

In the Finnish bulk shipping business model extracted from the cargo owner's interviews, there are some differences when thinking about the Greek bulk shipping business model extracted from the academic articles. Where the entrepreneurial spirit was playing a role in Greece, the Finnish version is more interested of the box-likeness and local presence. There are still some things that are shared. Shipping is seen as a transport service and personal connections are seen as a key to business, as are reputation and long-term commitment.

<p><b>Key Partners</b></p> <ol style="list-style-type: none"> <li>1) Customers</li> <li>2) Investors</li> <li>3) Crew/manning agency</li> </ol>	<p><b>Key Activities:</b></p> <ol style="list-style-type: none"> <li>1) Transport service</li> <li>2) Protecting the cargo</li> <li>3) Filling the local regulations</li> <li>4) Governing the cargo continuum</li> </ol>	<p><b>Value Proposition:</b></p> <p>Vessel as a cost efficient box, meeting all the regulations</p>	<p><b>Customer Relationships:</b></p> <ol style="list-style-type: none"> <li>1) Staying with shortlisted service providers</li> <li>2) Connections to the brokers</li> <li>3) Performance fulfils expectations</li> </ol>	<p><b>Customer Segments:</b></p> <ol style="list-style-type: none"> <li>1) Bulk</li> <li>2) Specific bulk cargo type</li> <li>3) Traffic-area relevant: bulk or break bulk, or special (deck) cargo</li> </ol>
<p><b>Cost Structure:</b></p> <p>Low capital cost (old ships) and high operating costs; OR High capital costs, low manning and maintenance costs; OR High capital and maintenance cost (survival mode)</p>	<p><b>Key Resources:</b></p> <ol style="list-style-type: none"> <li>1) A box-shaped cargo hold</li> <li>2) A suitably maintained cargo hold</li> <li>3) A suitable ice class</li> <li>4) Local presence</li> </ol>		<p><b>Channels:</b></p> <ol style="list-style-type: none"> <li>1) Direct calls or emails from the customer</li> <li>2) Brokers</li> <li>3) Visible presence at the area (via AIS (Automatic Identification System))</li> </ol>	
		<p><b>Revenue Streams:</b></p> <ol style="list-style-type: none"> <li>1) Long-term time charter contract</li> <li>2) Short-term charter contract</li> <li>3) Assets play (if possible)</li> <li>4) "Waiting for better times"</li> </ol>		

Table 11 Bulk shipping to and from Finland – the business model according to charterers' views

## **7. BUILDING A NEW BUSINESS MODEL ACCORDING TO THE OPPORTUNITIES AND CHANNEL ROLE PERFORMANCE**

In this chapter I will combine the requirements of the cargo owner with the typical sources of opportunities in order to see if this combination can be used as a formula to highlight the possible opportunities of the realm. The suitability of the opportunities is shortly examined.

Also, during this phase it is good to state that shipping as a business line is an interesting topic to analyse with the tools of academic entrepreneurship. Entrepreneurship opens up the reasoning, rather than the aftermath of the logistics service purchase and provision.

As presented above, I use a matrix (generated from the tables presented above) as a heuristic tool.

The first column of the table covers the elements of channel role performance found from literature. The second column covers the sub-elements which were extracted from the interviews. And in the third column I will place a suitable source of opportunity from the literature-based matrixes presented above. In the last column I will place an example of an opportunity which might be raised from the previous columns. As presented by Shane et al. (2000), the perception of opportunities is dependent on the subject. In this case the perception of the opportunities is done by the writer, but in such a manner that the heuristics have been done in structured and explicit way, meaning that the premises of the opportunity recognition are presented in the Table 4. The personal capability to recognise a source of opportunity and the example derived from there are based on the experience that I have as a maritime professional with 15 years' experience in shipping who has spent the last three years in R&D. They are, in that sense, extrapolated from both this study and my background. The most promising findings will be analysed in more detail later on.

<b>Part in the channel role performance</b>	<b>Elements of the channel role performance of the part</b>	<b>Sources of opportunities</b>	<b>An example of an opportunity</b>
Expected behaviour	Commitment to the code of conduct		
	Fulfilling MLC regulations	Social and demographical changes	
	Accepting the BIMCO clauses		
	<b>Governance of the cargo continuum (previous cargo)</b>	Information asymmetries, inefficient firms	Algorithm optimisation
	<b>Vessel age / insurance suitability</b>	New methods of production	Industry as owner, longer charter periods, new contract type
Adaptation	<b>Vessel size (small)</b>	New methods of production	Building up small vessel efficiency
	<b>Cargo-specific investments: bulk heads, cranes, side doors</b>	New products or services	A new design for the cargo hold
	Traffic area	Technological changes	Industry as owner, longer charter periods, new contract type
	Fulfilling the traffic area requirements: ice class, bunker, ballast water treatment	New products or services	A new design for cargo hold cleaning, a new design for propulsion power
Channel role	Availability, fleet management	Inefficient firms	Sharing and pooling
	Price	New ways of organizing, externalities	Including inefficiency and availability risk in calculations
	<b>Box-likeness</b>	<b>Technological changes</b>	<b>A new design for the cargo hold</b>
	<b>Tight hatches</b>	<b>Technological changes</b>	<b>A new design for hatches</b>
	Promptness	Information asymmetries	Algorithm optimisation
Shared goal	A clean cargo hold	political and regulatory changes	New design for cargo hole cleaning,
	A well-maintained vessel	Externalities	Including inefficiency and availability risk in calculations
	Crew competence	Flawed pricing mechanisms	Including inefficiency and availability risk in calculations
	Understanding the local conditions	Social and demographical changes	Including automatics

Table 12 An example opportunities matrix

When working on those elements above in order to build the updated business model, firstly I need to include the further interaction with the industry in order to minimize the externalities driven by not sharing the same goal. This integration could not be done between two players, but only by sharing and pooling the vessels in the local industries. Firstly the competitive situation between shipowners should be kept alive, to fulfill the paramount need of the cargo owners. To make this further applicable, a suitable technology with algorithms driven to optimize the cargo continuum, availability and promptness should be established. This further integration might bring up some interest conflicts, but it should be borne in mind that, by raising the utility ratio of the vessels, there might be a possibility to renew the vessels. At the moment all of the cargo owners have multiple providers for transport services in order to keep their negotiation status and enough reserves if needed. Also, the vessel owners have a tendency to have multiple vessels. With pooling, this reserve could be shared and the overall costs of the new builds could be shared by all of the players. With newer vessels some of the inefficiencies met today could be solved. The most imminent one - vessel age - and the highly important price of the local crew and the outdatedness of the cargo holds, all cause unnecessary time consumption during the loading and offloading, and even during sailing.

Together with a new building scheme, it might be possible to try to solve the problems of a new, smaller vessel. The price of new, smaller vessels could be lowered by added automation, but by practicing some "blue ocean thinking", a public-private partnership (PPP) could also be established, to facilitate the co-creation process. The EU has now decided to drive sustainable transport by multiple means and has established a lot of environmental legislation as an early mover (Greaves, 2018). If an EU-funded project<sup>6</sup>, a small bulker design for coastal traffic (with the EU financing part of it), if a suitable operator and customer are established, might help building such vessels: small, efficient and tailored for the industry needs. It was clear during the interviews that the need for smaller vessels is driven by the end customer's need to optimize warehousing - a trend that is not going to diminish in the future. This new bulker - we should call the concept "FolkBulker", a folk boat, or "*rintamamiestalo*" - a standard design purchased by an organisation and available for those needing one. In this way the design could cover all the cutting-edge technologies and have some new innovations with a suitable financing scheme. Of course, the downside is that those who have already invested in the vessels, but those vessels are most probably bigger in scale and, after the rest of the world slowly adopts the environmental legislation already established in the EU, a second-hand market might open for those vessels (as was indicated in one of the interviews).

To summarize all of the above, a last Business Model Canvas is presented below (Table 12).

---

<sup>6</sup> [https://ec.europa.eu/commission/priorities/jobs-growth-and-investment/investment-plan-europe-juncker-plan\\_en](https://ec.europa.eu/commission/priorities/jobs-growth-and-investment/investment-plan-europe-juncker-plan_en)

<p><b>Key Partners</b></p> <p>PPI model:</p> <ol style="list-style-type: none"> <li>1) Customers</li> <li>2) Other shipowners</li> <li>3) Manufacturer</li> <li>4) EU, investors</li> </ol>	<p><b>Key Activities:</b></p> <ol style="list-style-type: none"> <li>1) Minimizing warehousing at both ends</li> <li>2) Transport service</li> <li>3) Optimizing vessel availability</li> </ol> <p><b>Key Resources:</b></p> <ol style="list-style-type: none"> <li>1) New vessels built for Baltic coastal traffic</li> <li>2) Generation 2 cargo holds and hatches</li> <li>3) Local presence</li> </ol>	<p><b>Value Proposition:</b></p> <p>Just-in-time delivery and in as small as needed amounts</p>	<p><b>Customer Relationships:</b></p> <ol style="list-style-type: none"> <li>1) Sharing the cargo owners goal</li> <li>2) A playing-according-to-the-rules pool</li> </ol> <p><b>Channels:</b></p> <ol style="list-style-type: none"> <li>1) Participation in the pool</li> <li>2) Cargos optimized by algorithms</li> </ol>	<p><b>Customer Segments:</b></p> <ol style="list-style-type: none"> <li>1) Bulk in the Baltic Sea</li> <li>2) Specific bulk cargo type or special (deck) cargo</li> </ol>
<p><b>Cost Structure:</b></p> <p>The PPP investment scheme provides long payback times, a higher automation level with less crew and new ships' low maintenance costs</p>		<p><b>Revenue Streams:</b> Pooling with multiple customers helps create a steady revenue and a higher utilization rate, long term charter contracts</p>		

Table 13 The new business model for bulk shipping in Baltic

## 8. CONCLUSIONS

When connecting my studies to the previous studies on purchasing logistic services, the key finding is that the purchasing should be seen more in connection with the channel role performance than with the seller-buyer power ratio. The adaptations that Finnish industries need from their providers are many and need to be taken in to consideration when making purchasing strategy decisions. Also, the status and capabilities of the ship owners to renew their vessel capacity should be taken into consideration when making long-term purchasing decisions, if possible. The entrepreneurial discipline could and should be stretched to cover shipping as a trade with entrepreneurial opportunities. Understanding the opportunities and vulnerabilities of shipping as a branch of economics is important for both meeting the industry's needs and for the general capability of local economics.

Regarding finding entrepreneurial opportunities in bulk shipping, they exist, but low hanging fruits are not to be found. The economical situation, together with the industry's interest and capability to make long-term commitments in such situations, is supporting the perception of the situation as down term. Unfortunately, the investments needed are too heavy for the existing charter rates, which is something which has to be solved one way or another. Still, entrepreneurial opportunities might be available since the international vessel capacity will be too large and mostly without ice class, and unable to meet the need of regular year-round traffic with no warehousing facilities and CO2 limitations.

I started this work by introducing shipping and the cyclic way in which the world is moving when it comes to freight or vessel prices. I opened up some thoughts about the darker side of the entrepreneurship in shipping and then proceeded on to the legitim opportunities. The sources of entrepreneurial opportunities were analysed according to Shane (2003) and Cohen et al. (2007), and also the shipping-specific opportunities were highlighted. All the identified sources of opportunities were listed in order to support opportunity recognition and they were used later on when analysing the empirical data. Another tool introduced in the first part of the study was the Business Model Canvas of Osterwalder et al. (2010).

The combination of the entrepreneurial discipline and shipping was looked for in academic articles, but shipping has not been analysed widely within the entrepreneurial discipline. However, it was noted that merely Greek shipping has been analysed in a more systematic manner and within that realm there was some relevant coverage. When gathering the Greek business model based on academic writing, it was noted to be strongly driven by personal networks and shared company culture.

The empirical part of the study was done by multiple case studies, via semi-structured interviews with a total of eight persons working as cargo owners, brokers and shipowners. To support the interviews with some preliminary understanding of third-party logistic services, I firstly choose the Kraljic matrix (1983), which I was forced to change to the concept of channel role. The reasoning behind changing the concept used for these theory-driven interviews and for analysing them was based on the feedback from the informants. The placement of the provider within the matrix was not seen as a problematic, but it was the actual performance of the service provider within in the supply chain what was driving the preferences. Together with the channel performance concept, the actual needs and preferences of the cargo owners were analysed. The cargo owners' preferences required surprisingly much local and expensive adaptation – more than was identified at first. This covered capabilities like a suitable ice class; compliance with relevant and numerous national, Baltic Sea and EU regulations; and other practicalities (like environmental and MLC regulations), the low enough age of the vessel and in some cases, its small size – which in most cases is opposite to the former relationship of the smaller a vessel was, the older the it was). The amount of adaptation was not recognised as such, but it was mentioned that there are not “too many players around”. Of course the low state of charter rates were mentioned as well.

The opportunities recognisable from the results of the channel role performance analysis were reflected in the sources of opportunities listed in the first part of the study. A combination of recorded channel role expectations and list of opportunities was presented as a matrix (table 11). From the matrix the most convincing opportunities were lifted to the Business Model Canvas in order to conclude the opportunities as one example of the entrepreneurial opportunities, represented as a business model.

The example business model concentrates on a small vessel. Behind this focus was the frequently highlighted point: warehousing – both in terms of its capacity and the industry's own customers' interest to do it – is diminishing. The customers prefer having smaller amounts of the product at a time. The problem of the economics of a small vessel is two-sided – the investment is big when measured against the vessel capacity and so are the operating costs. The same cost could support a bigger ship with bigger capacity. In the new business concept this is addressed in two separate ways. The operating costs could be lowered by adding further automation to the vessel; this would optimize maintenance and could lower the manning costs. As is also important for cargo hatches and cargo holds, automation and instrumentation could lessen both the loading and unloading times and tie the transport to be an integral part of the manufacturing process. This will of course further cumulate the investment cost.

The investment cost could be reduced by the PPP concept. This would mean that multiple shipowners from the EU operating their vessels in the Baltic Sea would make a pool for

vessel purchasing. This could be built into EU-supported initiatives, so that money for handling the purchase process, some of the deposits and support for finding investors could be supported by the EU. The cargo owners could support the initiative by pre-agreeing to several longer-term charter contracts. The shipowners chosen for contracts could be agreed on beforehand or they could decide to name them later on, when the amount of contracts could be lower than the number of vessels. This would help to facilitate a healthy cost structure. Actors like Huoltovarmuuskeskus could also make direct contracts or give further support to investing. Even in general terms, if the shipowners could team, they could tap more easy financing at better terms if the vessel design were shared; it would further help to minimize the risk for investors. Also this shared concept design could help the equipment manufacturer to take part in the first phase investment. For example, the main engine could be partly financed by the manufacturer. This manufacturer financing could further help to build in all the latest technology in order to support the long lifespan of vessels (together with lessening the investment burden). When the new design and the vessel renewal programme are done with multiple vessel owners, the requirement of cargo owners to have multiple providers is also solved.

Since costs and reliability are the main drivers for the industry in terms of logistics, the question still remains open regarding if the recognised opportunities can help to generate savings that can be turned into profit. It might be that this would need a broader view of the subject, so that the externalities are counted in. The feasibility of the business model is subject to the cargo owners' interest in providing products in smaller amounts within the Baltic Sea.

To conclude this study, I would strongly emphasise the fact that shipping should be seen as a branch of economics, not just as logistics. Adopting this standpoint would help us to see the complexity, but also the opportunities, of this service industry. And further on, as there are entrepreneurial opportunities in this field, harvesting them is important for the economic vitality of Finnish industries. It should be in our general interest to further study the actual means by which support (like the PPP model I presented) can be provided to local shipping.

## 9. REFERENCES

Agapitou, Chrysa (2013), "Family businesses in the Hellenic Republic", in Final Workshop Report of "FAMILY BUSINESSES and SMEs in the Black Sea Economic Cooperation Region" organized by ORGANIZATION OF THE BLACK SEA ECONOMIC COOPERATION (BSEC) and KONRAD-ADENAUER-STIFTUNG (KAS), 7 - 9 October 2013, Istanbul, Turkey. Printed in Ankara, Ofset Fotomat. available via internet [http://www.kas.de/wf/doc/kas\\_37297-1522-2-30.pdf?140408094729](http://www.kas.de/wf/doc/kas_37297-1522-2-30.pdf?140408094729)

Academic Journal Guide 2015 Ladattu 14.11.2015  
<https://steffenroth.files.wordpress.com/2015/06/abs-2015-steffen-roth-ch.pdf>

Alvarez, Sharon A.; Young, Susan L.; Woolley, Jennifer L., 2015: Opportunities and institutions: A co-creation story of the king crab industry, *Journal of Business Venturing* 30, 95-112

Alastalo Marja, Åkerman Maria. (2010). Asiantuntijahaastattelun analyysi: faktojen jäljillä. Teoksessa Johanna Ruusu vuori, Pirjo Nikander, Matti Hyvärinen (toim.) Haastattelun analyysi. Tampere: Vastapaino, 372-392.

Andesson, E.J., Coltman, T., Devinney, T.M. and Keating, B., 2011. WHAT DRIVES THE CHOICE OF A THIRD-PARTY LOGISTICS PROVIDER? *Journal of Supply Chain Management*, 47(2), pp. 97-115.

Androniki A. Triantafylli & Apostolos A. Balls, 2010; Management control systems and performance: evidence from the Greek shipping industry, *Maritime Policy & Management*, 37:6, 625-660

Bichoui, Bell, 2007, "Internationalisation and Consolidation of the Container Port Industry: Assessment of Channel Structure and Relationships", *Maritime Economics & Logistics*, 2007, 9, (35-51)

BIMCO: "How will the crisis impact the future of the dry bulk shipping industry?" published 6.10. 2016, available via [file:///C:/Users/suutarlah/Downloads/BIMCO\\_report - crisis impact on the future of the wider dry bulk shipping industry 6 Oct 2016.pdf](file:///C:/Users/suutarlah/Downloads/BIMCO_report_-_crisis_impact_on_the_future_of_the_wider_dry_bulk_shipping_industry_6_Oct_2016.pdf) (uploaded on 25.11.2016)

Blank, Steve, 2013, Why the lean start-up Changes Everything, Harvard Business Review, Entrepreneurship on spotlight, May 2013.

Borch, Odd Jarl ; Batalden, Bjørn-Morten, 2015; Business-process management in high-turbulence environments: the case of the offshore service vessel industry. *Maritime Policy & Management*, 42:5, 481-498.

Brown, J. R., Lusch, R. F., & Nicholson, C. Y. (1995). Power and relationship commitment: Their impact on marketing channel member performance. *Journal of Retailing*, 71(4), 363-392.

Bucklin, Ramaswamy, Majumdar, 1996, "Analyzing channel structures of business markets via the Structure-Output Paradigm", *International Journal of Research in Marketing* 13 (1996)73-87.

Caniels, M. C., & Gelderman, C. J., 2005. Purchasing strategies in the Kraljic matrix – A power and dependence perspective. *Journal of purchasing and supply management*, 11 (2-3), 141-155.

Chafkin, Max, 2014, a broken place, Fastcompany, May 2014.

Clarksons Research, 2014. Up And Down The Box Rate Rollercoaster, s.l.: Clarksons Research. Source: <https://clarksonresearch.wordpress.com/2014/03/07/up-and-down-the-box-rate-rollercoaster/>

Clarksons Research, 2016. Greek Shipping – Still Number One!; May 27, 2016. Available via <https://clarksonresearch.wordpress.com/> [Uploaded 29 05 2016].

Cohen B. and Winn M.I., 2007. Market imperfections, opportunity and sustainable entrepreneurship. *Journal of Business Venturing*, 22(1), pp. 29-49.

Croom, Romano, Giannakis, 2000, "Supply chain management: an analytical framework for critical literature review", *European Journal of Purchasing & Supply Management* 6 (67)83.

De Carolis, D. M., & Saporito, P. (2006). Social capital, cognition, and entrepreneurial opportunities: A theoretical framework. *Entrepreneurship theory and practice*, 30(1), 41-56.

Eriksson, P. & Kovalainen, A., 2008. *Qualitative methods in business research*. Los Angeles, [Calif.] ; London: SAGE

The Economist; Still at sea - Shipping's blues, Mar 2nd 2017 via <https://www.economist.com/news/business/21718001-many-barriers-scraping-cargo-ships-shippings-blues>

Family Business and SMEs in the Black Sea Economic Cooperation Region, Final Workshop Report (2013), Workshop organized by ORGANIZATION OF THE BLACK SEA ECONOMIC COOPERATION (BSEC) and KONRAD-ADENAUER-STIFTUNG (KAS), 7 - 9 October 2013, Istanbul, Turkey. Printed in Ankara, Ofset Fotomat. available via internet [http://www.kas.de/wf/doc/kas\\_37297-1522-2-30.pdf?140408094729](http://www.kas.de/wf/doc/kas_37297-1522-2-30.pdf?140408094729)

Frazier, Gill, Kale, 1989, "Dealer Dependency Levels and Reciprocal Actions in a Channel of Distribution in a Development Country", Journal of Marketing, volume 53 Jan. 1989.

Gaglio, C. M., & Katz, J. A. (2001). The psychological basis of opportunity identification: Entrepreneurial alertness. Small business economics, 16(2), 95-111.

George, N. M., Parida, V., Lahti, T., & Wincent, J., 2016. "A systematic literature review of entrepreneurial opportunity recognition: insights on influencing factors." International Entrepreneurship and Management Journal, 12(2), 309-350.

Golafshani, N., 2003, "Understanding Reliability and Validity in Qualitative Research". The Qualitative Report, 8(4), 597-606 (via <https://nsuworks.nova.edu/tqr/vol8/iss4/6>)

Greaves, Rosa, 2018; guest lecture on the topic of: "The Single European Transport Area and Sustainability of the Transport Industry" provided by; The InterTran Research Group for Sustainable Law and Business in collaboration with the Finnish Maritime Law Association (CMI), in Helsinki 13th of February 2018.

Habbershon, Timothy G.; Williams, Mary L., 1999, "A Resource-Based Framework for Assessing the Strategic Advantages of Family Firms". Family Business Review March 1999 12: 1-25

Hammervoll, Trond; Bø, Eirill; 2010 "Shipper - carrier integration: Overcoming the transparency problem through trust and collaboration", European Journal of Marketing, Vol. 44 Issue: 7/8, pp.1121-1139.

Harlaftis, Gelina, 2008, "The Greek Shipping Sector c. 1850-2000" στο Lewis R. Fischer and Even Lange (eds), International Merchant Shipping in the Nineteenth and Twentieth Centuries: The Comparative Dimension No. 37, Research in Maritime History, IMEHA, St. John's Newfoundland, 2008, pp. 79-103.

Harlaftis, Gelina, 2014, "The Onasis Global Shipping Business, 1920s-1950s" Business History Review, p. 241-271

Hughes, Tim; Bence, David; Grisoni, Louise; O'Regan, Nicholas; Wornham, David; Scholarship That Matters: Academic-Practitioner Engagement in Business and Management. *Academy of Management Learning & Education*, 2011, Vol. 10, No. 1, 40–57.

Jennings, Jennifer E.; Edwards, Tim; Jennings, P. Devereaux; Delbridge, Rick: Emotional arousal and entrepreneurial outcomes: Combining qualitative methods to elaborate theory, 2015. *Journal of Business Venturing* 30, 113–130.

Kaish, S., & Gilad, B. (1991). Characteristics of opportunities search of entrepreneurs versus executives: Sources, interests, general alertness. *Journal of business venturing*, 6(1), 45-61.

Kiiski, T., 2017, Feasibility of commercial cargo shipping along the Northern Sea Route. Väistökirja. (via <http://www.doria.fi/handle/10024/130546>)

Kim, K. 2000, "On interfirm power, channel climate, and solidarity in industrial distributor-supplier dyads". *Journal of the Academy of Marketing Science*, 28(3), pp. 388-405.

Koskinen, I., Alasuutari, I. & Peltonen, T., 2005. Laadulliset menetelmät kauppatieteissä. Vastapaino, Tampere.

Kuhn, Thomas S. 1994, Tieteellisten vallankumousten rakenne, Art house, Juva. Vuoden 1969 alkuperäisteoksesta "*The Structure of Scientific Revolutions*", 2nd edition, suomennanut Kimmon Pietiläinen.

Lagoudis, I.N. & Theotokas, I.N., 2007, Competitive Advantages in the Greek shipping industry: A Supply chain management approach, *Maritime Transport: The Greek Paradigm, Research in Transportation Economics*, Volume 21, 2007, Pages 95–120

Langley, Holcomb, 1992, "Creating Logistics Customer Value", *Journal of Business Logistics*; 1992; 13, 2.

Learmonth, Mark, 2008, Evidence-Based Management: A Backlash Against Pluralism in Organizational Studies?, *Organization*, Volume 15(2): 283–291

Leonidou, Leonidas C., Barnes, Bradley R., Talias, Michael A., 2006, Exporter-importer relationship quality: The inhibiting role of uncertainty, distance, and conflict, *Industrial Marketing Management*, Volume 35, Issue 5, pp. 576-588.

Lind, M; Haraldson, S; Karlsson, M and Watson, R.T.; 2015. Port collaborative decision making-closing the loop in sea traffic management, 14th International Conference on Computer Applications and Information Technology in the Maritime Industries, Ulrichshusen, Germany 2015

Via: <https://pdfs.semanticscholar.org/ce1b/4e555d67e957e407944c6fbb7e69c6c4f5bb.pdf> (18.09.2017)

Lummus, Krumwlede, Vokurka, 2001. The relationship of logistics to supply chain management: developing a common industry definition. *Industrial Management & Data Systems*; 101, 8/9; ProQuest pg. 426

Mantell, C., 2012. To Scrap or Not to Scrap? VLCC Demolition. [Online] Available at: [http://www.clarksons.net/markets/feature\\_display.asp?section=&news\\_id=33365&title=To+Scrap+or+Not+to+Scrap%3F+VLCC+Demolition](http://www.clarksons.net/markets/feature_display.asp?section=&news_id=33365&title=To+Scrap+or+Not+to+Scrap%3F+VLCC+Demolition) [checked 06 04 2014].

Menon, McGinnis, Ackerman, 1998, "Selection Criteria for providers of third-party logistics service: an exploratory study", *Journal of Business logistics*, Vol. 19, No. 1.

Mitchell, R. K., Busenitz, L., Lant, T., McDougall, P. P., Morse, E. A., & Smith, J. B. (2002). Toward a theory of entrepreneurial cognition: Rethinking the people side of entrepreneurship research. *Entrepreneurship theory and practice*, 27(2), 93-104.

Mykkänen, J., 2001, *Eliittihaastattelu. Poliitikka: Valtiotieteellisen yhdistyksen julkaisu* 43 (2001): 2.

Osterwalder, A., & Pigneur, Y., 2010, *Business model generation: a handbook for visionaries, game changers, and challengers*. John Wiley & Sons.

Pittaway, Luke; Cope, Jason, 2007; *Entrepreneurship Education A Systematic Review of the Evidence*. *International Small Business Journal*, Vol 25(5): 479-510

The Platou Report 2015, RS Platou, available: via internet <http://www.platou.com/Default.aspx>

Raunio, Helena, 2016, *Merenkulkuun suunniteltiin oma Uber*, *Metallitekniikka*, 2, 37-38, via [http://www.dimecc.com/wp-content/uploads/2016/08/201602\\_Metallitekniikka\\_Merenkulkuun\\_suunniteltiin\\_oma\\_Uber.pdf](http://www.dimecc.com/wp-content/uploads/2016/08/201602_Metallitekniikka_Merenkulkuun_suunniteltiin_oma_Uber.pdf)

Roth, S., 2014; *The eye-patch of the beholder introduction to entrepreneurship and piracy*. *International Journal of Entrepreneurship and Small Business*, 22(4), 399-407.

Santala, Jouko, 1988, *Kauppamerenkulku ja satamatoiminnot*, Espoo: Weilin + Göös.

Sarasvathy, S., 2014; *The Downside of Entrepreneurial Opportunities*. *M@n@gement*, (4), 305-315. Retrieved from [http://www.cairn.info/article.php?ID\\_ARTICLE=MANA\\_174\\_0305](http://www.cairn.info/article.php?ID_ARTICLE=MANA_174_0305)

Sarasvathy, S. D., 2001; *Causation and effectuation: Toward a theoretical shift from economic inevitability to entrepreneurial contingency*. *Academy of management Review*, 26(2), 243-263.

Sarasvathy, S. D. and Venkataraman, S., 2011, Entrepreneurship as Method: Open Questions for an Entrepreneurial Future. *Entrepreneurship Theory and Practice*, 35: 113-135.

Shane, S. A., 2003, A general theory of entrepreneurship: The individual-opportunity nexus. Edward Elgar Publishing.

Shane, S., & Venkataraman, S., 2000; The promise of entrepreneurship as a field of research. *Academy of management review*, 25(1), 217-226.

Shinohara, Masato, 2010; Maritime cluster of Japan: implications for the cluster formation policies, *Maritime Policy & Management*, 37:4, 377-399

Short, J. C., Ketchen, D.J., Shook, C.L. and Ireland, R. D., 2010. The Concept of "Opportunity" in Entrepreneurship Research: Past Accomplishments and Future Challenges. *Journal of Management*, 36(1), pp. 40-65.

Skarmeas, D., Katsikeas, C. S., Spyropoulou, S., & Salehi-Sangari, E. 2008; "Market and supplier characteristics driving distributor relationship quality in international marketing channels of industrial products". *Industrial Marketing Management*, 37(1), 23-36.

Stock, Greis, Kasarda, 2000, "Enterprise logistics and supply chain structure: the role of fit", *Journal of Operations Management* 18, pp. 531-547.

Stopford, M., 2009 . *Maritime Economics 3rd edition*. Reprinted 2010 London: Routledge.

Suomen Huoltovarmuuskeskus, 2018, esitelmä; SUOMEN HUOLTOVARMUUS; Johtaja Jyrki Hakola, Aluemaanpuolustuskurssit, LAAVI, Luosto, 30.1.2018  
<http://www.avi.fi/documents/10191/10543650/Hakola.pdf/68bfe32f-6b3c-4f11-9716-108264eba932>

Suomen Varustamot, 2015, available via  
<https://twitter.com/RiFvarustamot/status/583177998498729984>

Tapaninen, U., 2013. *Merenkulun logistiikka*. 1. painos toim. Tampere: Gaudeamus Oy.

Teece, D. J. 2010. Business Models, Business Strategy and Innovation. *Long Range Planning*, 43(2), pp. 172-194.

Theotokas, John, 1998, Organizational and Managerial Patterns of Greek-Owned Shipping Enterprises and the Internationalization Process from the Interwar Period to 1990, *Research in Maritime History* no. 14, St John's, Newfoundland, pp. 303-318.

Theotokas, Ioannis, 2007, On top of World Shipping: Greek Shipping Companies' organization and management. *Maritime Transport: The Greek Paradigm*, Research in Transportation Economics, Volume 21, 2007, Pages 23–61.

Triantafylli, Androniki A.; Ballas, Apostolos A., 2010; Management control systems and performance: evidence from the Greek shipping industry, *Maritime Policy & Management* 37:6, 625-660

Trimi, S., & Berbegal-Mirabent, J. 2012. Business model innovation in entrepreneurship. *International Entrepreneurship and Management Journal*, 8(4), 449-465.

Turun Sanomat (TS), 2008; Taina, Jorma, Merenkulkutalouden professorin nimike häviää Turun kauppakorkeakoulusta, *Talous*, 7.5.2008.

Varustamobarometri 2017, via  
<https://www.slideshare.net/MinnaAlhosalo/varustamobarometri-2017> (5.1.2018)

Venkataraman, S., 1997; The distinctive domain of entrepreneurship research. *Advances in entrepreneurship, firm emergence and growth*, 3(1), 119-138.

Vinagre-Ríos, J., & Iglesias-Baniela, S., 2013; The human element in shipping casualties as a process of risk homeostasis of the shipping business. *The Journal of Navigation*, 66(3), 385-397.

Wensley, Robin, 2008, Chapter 4 - The basics of marketing strategy,  
Editor(s): Michael J. Baker, Susan Hart, *The Marketing Book (Sixth Edition)*,  
55-80.

Yin, R.K., 2014. *Case study research : design and methods*. 5th ed edn. Los Angeles: SAGE.

Zott, Amit & Massa, 2011, The Business Model: Recent Developments and Future Research, *Journal of Management* 2011: 37.

## 10. TABLE OF ARTICLE SEARCHS

<b>Search 1</b>	<b>Journal of Business Venturing</b>								
	maritime								
		5 osumaa							
			yhdessäkään ei mainittu varustamotoimintaa						
	vessel								
		5 osumaa							
			kaksi ajallisesti soveltuvaa ja sisällöllistä						
	ship								
		ilman aikarajaa 135							
			aikarajalla 14, joista ei yhtään soveltuvaa						
	ship-owner								
		ilman aikarajaa 72							
			aikarajalla 6, joista ei yhtään soveltuvaa						
	shipper								
		2 osumaa							
			joista ei yhtään soveltuvaa						
<b>Search 2</b>	<b>Strategic Entrepreneurship Journal</b>								
	maritime								
		0 osumaa							
	vessel								
		ilman aikarajaa 3							
			aikarajalla 1, joka ei soveltuva						
	shipping								
		156 osumaa							
			ei oikein soveltu - ei tunnista " " hakua						

	ship-owner shipowner/consigner/freighter/freight	/					
		0 osumaa					
	ship						
		156 osumaa					
			ei oikein sovellu - ei tunnista " " hakua				
	transport						
		ilman aikarajaa 11					
			aikarajalla 9, joista ei yhtään soveltuvaa				
<b>Search 3</b>	International Journal of Operation and production management						
	entrepreneurship shipping						
		ilman aikarajaa 11					
			aikarajalla 6, joista ei yhtään soveltuvaa				
	marine family						
		osumia 4					
			ei aikarajassa, ei soveltuvia				
	transport entrepreneur						
		ilman aikarajaa 30					
			aikarajalla 7, joista ei yhtään soveltuvaa				
<b>Search 4</b>	Transportation Research Part E: Logistics and Transportation Review						
	entrepreneurship shipping		Results: 1-11 of 11				
		ilman aikarajaa 11					
			aikarajalla 6, joista ei yhtään soveltuvaa				
	marine family						
		osumia 4					
			ei aikarajassa, ei soveltuvia				
	transport entrepreneur						
		ilman aikarajaa 30					
			aikarajalla 7, joista ei yhtään soveltuvaa				
<b>Search 5</b>	Maritime Policy and Management						
	entrepreneurship						
		21 osumaa					
			kolme ajallisesti soveltuvaa ja sisällöllistä				
	marine family						
		90 osumaa					
			liian laaja				
	entrepreneur						

		127 osumaa						
			liian laaja					

## QUESTIONS (LEVEL 1)

The interviews are to be done in Finnish, so the questions are as they will be presented. These basic questions were partly modified according to the informant.

1. Montaako eri laivaa käytätte yhtenä vuotena (noin, tyypillisesti)
2. Miten valitsette laivat? (käytättekä brokeria, onko teillä vakiintuneet toimittajat) (PROSESSI – Level 2)
3. Millaisia vaatimuksia asetatte laivalle – teknisiä, performanssi? (jääluokka, ruumien puhtaus)
4. Millaisia vaatimuksia laitatte laivan operaattorille/omistajalle?
5. Onko teillä suuri vaihtuvuus? Onko se ongelma?
6. Onko teillä vähimmäiskoko toimittajillenne? (CONSOLIDAATIO Level 2)
7. Onko teillä uusia toimittajia, vaihdatteko toimittajia?
8. Tuetteko toimittajianne joillakin tavoilla?
9. Ovatko sopimukset pitkiä?
10. Kerro teidän toimittajanhallinnastanne (entä käytäntö)
11. Mikä on tärkeintä?
12. Miten uudet investointi paineet?
13. Käytättekö jotain uusia sovelluksia alusten valintaan?
14. Muita kehityspaineita?

15. Miten kuvaisit suhdettanne laivoihin? Ennen kontraktia, operoinnissa?

16. Mikä on leimallista bulk -toimialalle? Onko siinä jotain korjattavaa?