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The Russian maritime industry and Finland

Electronic Publications of Pan-European Institute 2/2015

The Russian maritime industry and Finland

Hanna Mäkinen

2/2015

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Executive summary

- 1) Due to historical reasons, the civil shipbuilding industry is weakly developed in Russia and is currently not competitive in commercial sense. The Russian shipyards are in a rapid need of modernisation and the shipbuilding industry suffers from low productivity and technological inferiority compared to other shipbuilding nations. In order to improve the industry's competitiveness, international cooperation is needed.
- 2) The Russian maritime industry has recently received increased political attention and funding. Particularly the growing interest in the Arctic hydrocarbon fields and sea routes as well as the continuous importance of energy exports for the Russian economy have boosted the development of the shipbuilding sector. In addition, as Russia has engaged into rearmament, the demands of the Russian navy significantly direct the development of the Russian maritime industry.
- 3) The current unstable political and economic situation, particularly the ruble's decline against the euro, the plunge in world oil prices and the economic sanctions imposed on Russia, have complicated the implementation of maritime and offshore industry projects in Russia. The sanctions have a negative impact on the Russian shipbuilding and offshore industries as they complicate companies' possibilities to attract foreign financing and prohibit exports of products and services and technology transfer to Russia if they are related to defence and oil industries.
- 4) Finland and Russia have a long history in cooperating in the maritime industry and nowadays particularly the Finnish expertise in Arctic and offshore technologies is of a great interest to Russians. However, the current economic and political situation has made the Russian market less appealing for Finnish companies and the interviewed SMEs view that they lack resources to develop their activities in Russia in the current situation.
- 5) The reactions of the interviewed SMEs to the current situation in Russian maritime and offshore industry vary. However, they recognized that internationalisation is always challenging. Consequently, whether they choose to turn to other markets, maintain existing contacts or even actively develop their activities in Russia, all companies should develop their activities in a strategically far-looking and patient manner as internationalisation in the end depends on the company itself. Regardless of the field of business or the geographical location of the market, it will always take a long time and a lot of resources to form business contacts and build trust, and immediate success cannot be expected.

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1 Introduction

The interest to develop the maritime and offshore industry has been growing in Russia during the recent years, particularly due to increasing strategic significance of the Arctic region both in energy production and as a shipping route. The maritime industry has recently received increased political attention and funding in Russia, and its modernisation is considered as one of the priorities in the country's industrial development. Currently, the main end-users of the Russian maritime and offshore industry – the navy and the energy companies – are competing for the capacity of the Russian shipyards. Russia's energy industry is in particular need for various types of vessels and offshore structures for exploiting Arctic hydrocarbon resources and thus the development of the civil shipbuilding industry has been a priority in Russia. On the other hand, the current rearmament of Russia has led to an increased need for naval shipbuilding, which already dominates the Russian maritime industry due to the Soviet legacy. The Russian civil shipbuilding industry is underdeveloped and not competitive on a global scale, suffering from technological inferiority and low productivity.

As Russia's current shipbuilding capacity is unable to meet the growing demand for vessel production, Russia is in need of international cooperation in maritime and offshore industry. Engagement in international activities can be seen as a key for developing Russia's own maritime expertise and foreign companies have so far been very interested in entering the country's maritime business due to the huge market potential, particularly regarding the Arctic vessels and shipping. Russia has aimed to close the technological gap with the successful shipbuilding nations by establishing joint ventures with foreign companies, thus facilitating technology transfer and simultaneously improving the quality of Russian vessels. In any case, considerable developments are needed in order for the Russian maritime industry to become able to truly participate in international competition and the development aims of the Russian shipbuilding industry cannot be met without international cooperation.

Consequently, the Russian maritime sector appears rather attractive for foreign enterprises, offering interesting business opportunities also for Finnish maritime companies. Finland and Russia have a long history in shipbuilding cooperation, starting from the war reparations after the Second World War and continuing as bilateral trade during the Soviet era. Moreover, the knowhow of Finnish maritime companies regarding for instance Arctic and offshore technologies, as well as traditionally good relations and experience of doing business with Russia provide good foundations for cooperation. However, there are also

challenges related to both the modernisation of the Russian maritime industry, which will certainly take time, and the country's business environment, which foreign companies often find too risky related to the expected profits. Moreover, the current economic downturn and the sanctions imposed on Russia due to Ukrainian crisis significantly complicate business cooperation between Russian and western companies in the maritime and offshore sector.

The economic situation and sanctions have also impacted the trade between Finland and Russia. Finnish exports to Russia have been shrinking since the autumn 2013 and in March 2015, Germany overtook Russia as Finland's most important trading partner – a position which Russia has had since 2007 (Finnish Customs 2014). However, despite of the shrinking trade, the reactions of Finnish companies to the current market situation in Russia seem to vary. According to the recently published *Barometer of Russian trade* by Finnish-Russian Chamber of Commerce (2015), more than a third of Finnish companies trading with Russia aim to expand their activities in Russia, for instance by increasing marketing and sales or opening new branches. Less than a thirty percent is not doing anything special whereas a bit over a quarter is cutting their activities in Russia, for instance by thinning down personnel or reducing marketing and sales.

Consequently, it seems that the majority of Finnish companies are not abandoning Russia but rather adapting to the prevailing market situation. Nevertheless, according to the Barometer, more than 80% of the companies have experienced at least indirect effects due to the sanctions. Regarding the different sectors, the expectations about the future prospects of trading with and doing business in Russia are the most pessimistic among the industry.

Consequently, the current political and economic situation and the recent developments in the Russian maritime sector afford an interesting context to study the Russian maritime and offshore industry which provides both challenges and opportunities for foreign companies. As comprehensive analysis of the development of the Russian maritime industry and the business opportunities it offers for foreign companies is lacking¹, the aim of this study is to respond to this demand by providing a comprehensive view on the current state and development of the Russian maritime and offshore industry, taking into account the perspective of Finnish companies.

¹ See Appendix 2 for the summary of the previous studies and reports on the Russian maritime industry since 1990.

This study is based on various written sources, such as earlier studies and reports, company reports, policy documents and media sources, as well as interview material, including company and expert interviews. A more detailed description of the objective and the implementation of this study is provided in Appendix 1.

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2 The development of the Russian maritime industry

2.1 The early years of the Russian maritime industry

Russia can be considered a relatively young maritime nation as its naval and merchant fleets really started to develop only in the 18th century. Russia's emergence as a maritime nation made important steps forward during the reign of Tsar Peter I (1682–1725), also known as Peter the Great, who has been considered as the father of the Russian shipbuilding. The establishment of the Russian shipbuilding industry and the Admiralty, and the construction of warships were among the highest priorities during his reign. (Polmar & Noot 1991) Consequently, the development of the Russian maritime industry is closely linked to the development of the Russian navy.

Despite of some military-related reforms implemented already by his predecessors, Peter the Great can be considered to really have started the modernisation and Europeanisation of the tsarist Russia (Luukkanen 2009). He implemented reforms in a mercantilist spirit, aiming to bolster the state's economic power by increasing exports and self-sufficiency. The Tsar's goal was to make Russia an efficient economic unit by constructing roads, waterways and ports, developing industries and sciences, creating a stable currency and standardising measures. (Luukkanen 2011) After gaining a connection to the Baltic Sea in the Great Northern War, Peter the Great invested particularly in the development of Baltic Sea ports and the construction of connecting inland waterways to replace the old sea route from Arkhangelsk (Lappalainen 2000).

Peter the Great also created the Russian bourgeoisie which was to supply the state with ships and arms (Luukkanen 2011). The Tsar had always been interested in the military and had a practical relationship to it, participating for instance in the actual building of warships. He also learned the importance of modern arms technologies and the navy the hard way, by losing battles, and become convinced that Russia would need both a powerful army and an efficient economic system in order to maintain its power in Europe. (Luukkanen 2009)

Peter the Great's reforms had been greatly influenced by his experiences abroad. In the late 17th century Peter the Great travelled to Europe, to Holland and England in particular, to learn the latest technologies in shipbuilding and seamanship. He acquired both theoretical and practical knowledge of shipbuilding – for instance, he spent four months in Holland by actually building a ship. He also wanted to study how navies were organised in these traditional sea might countries, and to recruit shipbuilding and navigation specialists to

Russia. The Tsar's efforts in recruiting professionals proved successful as some 750 specialists of different fields, including master shipbuilders and assistants, mast-makers, riggers, joiners, anchor-makers, captains, pilots, gunners and engineers, agreed to travel to Russia with him. (Lappalainen 2000; National Maritime Museum 2014)

In fact, western European technologies acquired during the Tsar's journey played an important role in the development of an efficient Russian navy and shipbuilding industry. In the beginning of the 18th century, a large shipbuilding industry with a special emphasis on seagoing vessels was established and a fleet was founded in the Baltic Sea. By the end of Peter the Great's reign, some 30 000 men were already serving in the Russian navy, on some 50 large vessels and 400 other battleships. The navy was modern, with educated officers and up-to-date weaponry and other materials. (Lappalainen 2000) Foreign expertise was taken advantage of in the early years of the fleet, as many of its ships were built, maintained and manned by British. Moreover, over the next 100 years, many high-ranking officers for the Russian navy originated from England, and Russian seamen trained on British ships in both the Royal and Merchant Navies. (National Maritime Museum 2014)

Peter the Great's reign was of great significance to the development of the Russian navy – it had been practically non-existent before his time but afterwards, following a complete reorganization of the Russian industry and armed forces, the country became a successful naval power. Based on the reforms Peter the Great had initiated, the Russian navy was developed further during the reign of Catherine the Great, Peter's grandson's wife. (National Maritime Museum 2014) However, although the trade in the Baltic Sea flourished in the 18th century, the development of the Russian merchant fleet was very modest, and Russia's western foreign trade was in the hands of German, English and other foreign merchants. Nevertheless, Russia exported various shipping-related goods to England and Holland, such as tar, sailcloth, hemp ropes and masts. (Juntunen 2000) The development of submarines in Russia started already during the 18th century as well, and by the end of the 19th century, the Russian navy had gained significant experience in the design and construction of submarines (Polmar & Noot 1991).

The lost Crimean War in the 1850s became the impulse for the industrial modernisation of Russia (Luukkanen 2011). The crushing defeat Russia experienced against England and France in the Crimean War showed that the earlier so powerful Russian army was now completely inefficient with outdated weaponry, and the country's infrastructure was weak, particularly due to lack of railways (Jussila 2000). Industrial revolution in Russia started in

the 1880s, leading to the creation of the Russian large-scale industry. Foreign influence in Russia's industrial development was significant at the time, foreign investors and knowhow playing a crucial role in the process. At first, Ukraine was leading the industrial development with its coal and iron resources but was later followed by for instance the St. Petersburg and Moscow regions. (Luukkanen 2011) Furthermore, in inland shipping manpower was increasingly being substituted with steam power and urbanisation was also growing (Luntinen 2000).

Russian naval facilities and shipbuilding industries have historically concentrated in the St. Petersburg area by the Baltic Sea and in the Nikolaev area by the Black Sea (at present located in Ukrainian territory and called Mykolaiv). The oldest shipyard in St. Petersburg, the Main Admiralty Yards was founded in 1705 but closed in 1844 and moved to the New Admiralty Shipyards some 1,6 kilometers downstream Neva River. The Baltic Shipyard, also on the banks of the Neva, was founded in 1856. By 1917, the St. Petersburg area hosted thirteen shipyards in total, of which several produced also steam engines and military equipment. The second centre of the Russian shipbuilding activity, the old port of Nikolaev, hosted for instance a large private shipyard called Andre Marti Shipyard and the Admiralty Shipyard established in the 18th century. All these shipyards were specialised in building various types of military vessels. (Hauner 2004)

Before the Soviet era, periods of Russian naval expansion alternated with stagnation. The Crimean War, the Russo-Japanese War, the First World War and the Russian civil war were particularly disastrous for the Russian navy and it took long for it to rebound after the wars. Moreover, one of Russia's main problems regarding the naval expansion was geography. Russia's various sea areas, and consequently the different fleets, were remote and isolated from each other. The Baltic Sea, the Black Sea and the Pacific fleets were far away and separated from each other and the Northern fleet by the Arctic Ocean was surrounded by ice for the most of the year. (Hauner 2004)

The rebound of the Russian navy after the defeat in the Crimean War took half of a century, but before the war with Japan in 1905, the Russian navy had developed into the third most powerful in the world. However, in 1905 the Russian navy suffered a crushing defeat against Japan in the Far East. After the defeat that was the most devastating in Russian navy's entire history, Tsar Nicholas II announced the goal to re-establish the navy, with a special emphasis on large and effective battleships, dreadnoughts, symbolising national power and bringing prestige for the country. Besides the dreadnoughts, another successful and

innovative ship of the Russian navy in the 1910s was a destroyer called Novik. Both the dreadnoughts and Noviks were built at Russian shipyards in St. Petersburg. In 1912, a large construction programme for the Russian navy was approved, comprising 24 battleships, 12 battle cruisers, 24 small cruisers, 108 large destroyers and 36 submarines. However, the programme was interrupted by the outbreak of the First World War and only a part of the planned vessels were completed. (Hauner 2004) The well-progressing industrialisation was also seriously interrupted by the First World War and the following revolution and civil war in Russia – in 1917–1921, the Russian industrial production was on average equivalent to one tenth of the pre-war production – not to mention that the creation of the Soviet Union altered the course of development profoundly (Luukkanen 2011).

2.2 The Soviet era and the trade with Finland

After his rise to power, Joseph Stalin started an industrial modernisation of the Soviet Union with the aim to establish the country as a key player in the global market. Stalin aimed to expand industrial production rapidly and systematically by way of the five-year plans. The first five-year plan, adopted in 1928, called for rapid industrialisation with a particular emphasis on heavy industry which Stalin thought would be the foundation of a profitable state. Already the first five-year plan exceeded the expectations, resulting in a significant increase in the Soviet industrial production, and by the Second World War, Stalin had managed to ruthlessly turn the Soviet Union from an agrarian state to a modern industrialised superpower. (Vihavainen 2000)

Stalin's industrialisation project covered the Russian shipbuilding industry as well. The modernisation of the main shipyards in Leningrad and Nikolaev continued and completely new shipyards were built in the remote areas of the Russian Arctic and the Far East, for instance in Severodvinsk and Komsomolsk, in the 1930s. Due to Russia's limited shipbuilding capacity, naval technology and equipment were purchased abroad, for instance from Germany, Italy and the United States. In order to acquire a powerful, oceangoing navy for the Soviet Union, Stalin introduced a massive development programme for the Soviet fleet but the Russian shipbuilding industry failed to meet the ambitious targets of the programme. The programme also included the goal to acquire large warships to be the symbols of the Soviet sea might – however, the huge ships suited poorly for the shallow waters of the Baltic Sea. Consequently, Stalin's successors abandoned this aim and shifted the focus of the Soviet naval development to submarines and fast missile boats. (Hauner 2004)

The Cold War was characterised by military competition between the socialist and capitalist blocs and the military interests also guided the development of the Soviet maritime industry. Due to significant investments in military technological development, the Soviet navy competed in strength with the US. (Jungar 2000) The Soviet shipyards were focusing on military orders and civil vessels were built only exceptionally, for optimal utilisation of shipyards' capacities. Orders not related to defence were placed to Ukrainian shipyards, and in the Eastern bloc German Democratic Republic, Poland and Romania were also specialised in civil shipbuilding. (Finpro 2011)

Furthermore, ships were also imported from Finland, first as a part of war reparation payments and later as commercial orders. The Finnish war reparations to the Soviet Union in 1944–1952 consisted mainly of forestry products, ships and machinery. Forest industry was one of the strongest fields of the Finnish economy, whereas shipbuilding and machinery industries were relatively weakly developed – still, ships and engineering products constituted the main share of the deliveries. First war reparations, delivered in 1944, comprised mainly old items – for instance, although the Finnish commercial fleet had halved during the war, most of the remaining vessels, including small ones, had to be given up to the Soviet Union. The Soviet preferences in deliveries resulted from an immediate demand for all kinds of vessels in the Soviet Union, as it had emerged as the dominant coastal state in the Baltic Sea region after the Second World War. (Sutela 2014)

All in all, war reparations put a great strain on the whole Finnish society. They also had an impact on the Finnish industrial structure although their importance to the industrial development remains a controversial matter. Eventually, metal industry products made up some two thirds of all war reparations to Soviet Union, leading to a significant increase in the capacity of the Finnish metal industry. Particularly the Finnish shipbuilding industry experienced a notable expansion. The growth in production capacities of the Finnish shipyards can be illustrated in the example that only 14 commercial ships were produced at Finnish shipyards during the ten years preceding the Second World War, whereas 581 vessels were constructed as war reparations to the Soviet Union. (Auer 1956; Sutela 2014) Fulfilling the obligations was an enormous task – the production capacity of existing shipyards had to be multiplied and new shipyards built. Finland was just recovering from the war and there was a shortage of everything – experience in shipbuilding, skilled workforce and materials. However, the industry succeeded in delivering all the vessels and simultaneously in developing its shipbuilding capacity and knowledge. (Landtman 1990)

Although the Finnish shipbuilding industry experienced a notable growth at the time of war reparations, it did not start from scratch. The industry had existed and was able to produce some vessels for export before the Second World War as well. For instance, Germany had ordered submarines from a shipyard in Turku in the 1920s in order to avoid Versailles treaty limitations (Sutela 2014). In addition, Finland had delivered some ships already to Tsarist Russia in the 19th century and later on to the Soviet Union in the 1930s (Landtman 1990). Moreover, the forward-taking impact of war reparations on the Finnish maritime industry can be questioned in the sense that a part of the vessel deliveries to the Soviet Union were technologically retrograde, such as wooden schooners (Sutela 2014). Nevertheless, the war reparations initiated a decades-long period of bilateral trade between Finland and the Soviet Union, in which the products of the Finnish maritime industry played an important role.

A five-year agreement for the continuation of the trade between Finland and Soviet Union was signed in 1950 and Finland became the first market economy to sign such agreement on the exchange of goods with the Soviet Union (Laurila 1995). The agreement was good news for Finnish industries because they had feared that the Soviet demand would end together with war reparations (Sutela 2014). On the contrary, the first trade agreement started a 40 year period of bilateral Finnish-Soviet trade, covering eight five-year agreements until 1990 (Laurila 1995).

For Finnish companies, this system offered a relatively stable and predictable export market. The Finnish exports to Russia comprised mainly forestry products, ships and machinery, as well as equipment and vehicles. (Ollus & Simola 2006) From the very beginning, the Soviet Union was dependent on foreign supplies and particularly technologies, and was eager to buy as much as possible from Finnish producers (Sutela 2014). Exports from the Soviet Union to Finland, on the other hand, were dominated by mineral products, particularly crude oil (Ollus & Simola 2006). Consequently, the Soviet Union was exchanging raw materials for Finnish products with an increasingly high degree of processing and value-added content (Sutela 2014).

Ships continued to play an important role in Finnish exports to the Soviet Union in the 1950s, when the share of ships of all imports was nearly 50% (Ollus & Simola 2006). In the 1950s, Finnish shipyards sold similar vessels to the Soviet Union that had before been delivered as war reparations, and little product development was needed at that time. In fact, Finnish shipyards benefited from the continuation of exports to the Soviet Union because in the 1950s they were not competitive in western markets. During the period of war reparations,

they did not need to pay attention to cost-effectiveness as they were not exposed to external competition and delivering ships in time was more important than production costs. (Landtman 1990; Sutela 2014) Even after the war reparations had been completed, the Soviet Union continued to buy relatively expensive Finnish ships also in order to maintain social peace in Finland – to keep the Finnish metal industry workers, the traditional Communist supporters in Finnish elections, employed and satisfied (Sutela 2014).

Finnish shipyards also benefited from the fact that the building of ships delivered to the Soviet Union was financed with advance payments until the 1980s. Shipyards received a quarter of the total value of the vessel when the deal was made and the whole payment was already made by the date the ship was delivered to the Soviet customer. (Sutela 2014) Due to these arrangements, Finnish shipyards did not need export credit systems, and selling ships to the Soviet Union was particularly profitable (Ollus & Simola 2006; Sutela 2014).

Ships were the largest single item in Finnish exports to the Soviet Union until the early 1970s, although their share of all exports declined to some 20% (Ollus & Simola 2006). The technological sophistication of vessels improved together with their declining share in all exports and Finnish shipyards increasingly specialised in particular type of vessels, such as icebreakers (Sutela 2014). In the 1940s and 1950s, the ship deliveries from Finland to the Soviet Union had consisted mainly of series of vessels, such as barges, tugs, trawlers, schooners and steamboats. Building of these relatively simple vessels had allowed the Finnish shipbuilding industry to develop its skills, technologies and production processes. When a solid knowhow for shipbuilding had been developed, the specialisation towards more demanding vessel types progressed gradually. In the 1950s, the Finnish shipyards delivered the first tankers, icebreakers and research vessels to the Soviet Union. In the 1970s, the Finnish shipbuilding industry had already developed its quality and technological knowhow to a world-class level and increased specialisation had led to production of smaller series and more complicated types of vessels. (Välisalmi 1990)

In 1990, Finland and the Soviet Union did not sign a new trade agreement and bilateral trade ended. The Soviet Union collapsed in the end of 1991, leading to the formation of new Russia, and Finland was simultaneously hit by a hard recession. Many Finnish industries were affected by the recession and the concurrent end of trade, and for instance the maritime industry had to go through a restructuring. (Ollus & Simola 2006)

In Russia, in turn, the maritime industry experienced a deep financial and personnel crisis in the 1990s due to the political and economic turmoil brought by the collapse of the Soviet Union. Shipyards that had existed on state orders were not competitive in a commercial sense and the weight given to the military production during the Soviet era had hindered the development of civil shipbuilding (BOFIT 2012). R&D in the Russian maritime industry deteriorated due to lack of financing, and this decline was further intensified by brain drain of professionals (Gritsenko 2013). Moreover, shipyards were suffering from lack of orders as the need for military vessels in Russia had decreased significantly and converting them into civil shipyards would have been rather difficult due to conceptual and technological differences (Finpro 2011). In addition, the old socialist shipyards were not economically viable as such but required radical restructuring. The Soviet shipyards had been multifunctional units, with all production in-house and focusing not only on shipbuilding but also on offering social services to the employees – but lacking design and innovation capacities. (Bitzer & von Hirschhausen 1997) Following the collapse of the Soviet Union, the Russian navy fell into decay as well and pictures of nuclear submarines rusting away in docks caught the western media attention (Hauner 2004).

After the collapse of the Soviet Union, the Soviet fleet was divided between the newly independent countries, Russia receiving about half of the tonnage but partly in bad condition (Gritsenko 2013). The new geopolitical situation also destroyed the horizontal industrial chains of the Soviet Union and Russia lost a considerable number of shipbuilding and repair facilities, ports and naval bases that were located in newly independent states, such as in the Baltic States and in the Ukrainian Black Sea coast. Ukraine was a major shipbuilding hub in the Soviet Union, and the largest ships of the Soviet navy, such as aircraft carriers, were built in Ukrainian shipyards. Furthermore, gas turbine engines and power plants for naval vessels were also produced in Ukraine, in highly specialised production centres close to the shipyards. In fact, the supply of gas turbines from Ukraine has been crucial for many Russian shipbuilding projects until today and it was only recently stopped due to the Ukrainian crisis. (Finpro 2011; Bodner 2015a)

2.3 The recent developments and the guiding interests

The period after the collapse of the Soviet Union has been difficult for the Russian shipbuilding industry. In the 1990s, the industry experienced a deep crisis due to the collapse of the Soviet Union and several economic recessions following it, and even after that the growth of the maritime industry, particularly commercial shipbuilding, has been rather modest. (Motorship 2011) Nevertheless, the Russian government has had a strong

interest in boosting the development of the maritime industry, also classified as one of the strategic sectors of the economy along with aerospace and aviation industries. Consequently, the government has throughout the years adopted several political strategies and financial programmes in order to address and solve the industry's problems.

In 2001, the Maritime Doctrine of the Russian Federation 2020 laid down the foundations for the development of the national maritime policy, defining the protecting of Russian interests in the world oceans and the strengthening of the country's position among the leading maritime nations as the main policy objectives. The Doctrine also recognised the needs to modernise the Russian fleet and to construct new vessels that meet international standards, by prioritising domestic companies. According to the Doctrine, foreign investors are needed for the maritime sector's development but their access in maritime activities affecting national security needs to be restricted. (The Maritime Doctrine of the Russian Federation 2020 2001) The Russian Federation Maritime Activities Development Strategy 2010–2030 (2010) complemented the Maritime Doctrine with concrete aims and means, for instance regarding the recovery of the shipbuilding industry. Furthermore, in order to coordinate and improve cooperation between the various ministries, agencies and services in the maritime sector, the Maritime Board was created in 2001. (Gritsenko 2013)

Besides the political strategies, the Russian government has also adopted several financial programmes to support the maritime sector since the late 1990s. For instance, in 1998 a conceptual and financial instrument for Russian maritime policy, a Federal Target Program World Ocean was adopted, aiming to improve the state of maritime affairs in the country and create a stronger presence for Russia in the global maritime sector. However, World Ocean was criticised for the lack of financial resources and several sub-programmes were closed down due to insufficient funding. Some years later, a Federal Target Program Modernization of Russian Transport System was adopted, including a special sub-programme for maritime transport for 2002–2010. (Gritsenko 2013) It was followed by a Federal Target Program Development of Russian Transport System (2010–2015), focusing mainly on increasing the tonnage of the Russian-controlled maritime transport fleet and the production capacity of Russian ports (Finpro 2011).

The Russian maritime industry has recently received increased political attention and funding. The interests of the Russian government to gain a stronger role in the global shipbuilding sector, develop new hydrocarbon fields on the continental shelf and increase maritime traffic in the Northern sea areas are reflected in the recently adopted development

programmes to support the shipbuilding industry. Particularly the growing interest in the Arctic hydrocarbon fields and sea routes as well as the continuous importance of energy exports for the Russian economy have boosted the development of the shipbuilding sector. The Russian economy is highly dependent on the energy export revenues, oil and gas revenues constituting half of the budget and over 70% of the exports of goods in Russia (The Ministry of Foreign Affairs of Finland 2013) and Russia's foreign policy priorities of securing energy transports and controlling transport routes also guide its maritime policy. In addition, Russian shipbuilding is strongly linked to the military industry due to the needs of the navy for various kinds of vessels.

In 2007, the Russian government approved the Development strategy of shipbuilding in Russia until 2020 and for longer term, focusing particularly on maritime projects related to Arctic conditions. The development strategy defines priorities for the civil shipbuilding, including ice-capable oil tankers, LNG carriers, new generation nuclear icebreakers, container ships for the Northeast Passage transport services, oil and gas platforms and special equipment for Arctic offshore projects, modern scientific research vessels, and new types of engines and power units for ice-going vessels and icebreakers. (Finpro 2011)

Moreover, in 2012 an ambitious state programme Shipbuilding Industry Development 2013–2030 was approved, aiming at quintupling Russia's shipbuilding output by 2030 with total state funding reaching RUB 1,3 trillion (Vorotnikov 2012). The programme, principally executed by the Ministry of Industry and Trade, aims to improve the competitiveness of the Russian shipbuilding industry both in national and global markets and to close the technological gap with other shipbuilding nations, focusing for instance on developing R&D, technologies and cost-effectiveness, as well as expanding the production potential and facilities of the civil shipbuilding industry and improving the knowhow and motivation of the shipbuilding industry's workforce. (Government of the Russian Federation 2012) The development programme divides the Russian shipbuilding industry into three clusters: the robust Northwest Russia requiring modernisation, the Southern Russia concentrating on shipbuilding in special economic zones, and the Far East with a new modern shipyard complex (BOFIT 2012). Particularly the Far Eastern complex seems to be the future priority for the Russian government because the region is among the central oil and gas production areas and these operations also require new maritime capacity in the area.

Consequently, the needs of the Russian energy industry also guide the development of the country's maritime sector and if the Russian economy remains energy-driven, the situation is

not likely to change in the foreseeable future (Dobronravin 2012). On the contrary, due to the depletion of continental and coastal deposits, energy production is increasingly shifting north to deep water deposits in demanding Arctic conditions, for instance in the Barents and Kara Sea areas (Dekhtyaruk et. al 2014). In fact, the Russian Arctic is estimated to hold more than half of the potential Arctic oil and gas resources (Ernst&Young 2013a) and the development of these northern regions is gaining increasing attention and investments from the state as well as businesses.

However, the extreme natural and climatic conditions, as well as the poorly developed infrastructure create challenges for energy companies, and they also need to take into account the special environmental requirements for operating in the Arctic. Russian companies lack adequate knowhow and technologies for exploiting the Arctic deep water deposits, and both the energy industry and the supporting maritime industry are required to make considerable investments and produce completely new technological solutions for the icy conditions. (Dekhtyaruk et. al 2014)

Reflecting the growing economic importance of the Arctic region, another interest guiding the Russian maritime policy nowadays is the development of the Northeast Passage, the Arctic sea route along the Eurasian northern coast. The development of the route, which provides a shorter alternative to the southern Suez Canal route (see Figure 1), has been a particular priority for the Russian government during the last few years. For instance, in 2012, a special administration for the Northeast Passage was established under the Russian Ministry of Transport and in 2013 a special decree on rules and regulations on route shipments was approved. (Staalesen 2014a) Furthermore, in 2015, Russian Prime Minister Dmitry Medvedev approved a plan for the development of the Northeast Passage, aiming to a 20-fold increase in the route's capacity over the next 15 years. The plan comprises for instance navigational and hydrographic support and creation of new maps, maritime traffic regulation system, environmental protection and establishment of search and rescue infrastructure along the route, as well as securing the route defense-wise. (Pettersen 2015)

Russia expects the amount of cargo transported via the Northeast Passage to increase significantly in the next decade (Pettersen 2014b). Indeed, the period during which the Northeast Passage is navigable has been lengthening (currently open between July and November) due to global warming and melting of Arctic sea ice. The route has also seen an increase in traffic from 2011 to 2013 (71 ships were passing it in 2013, compared to 46 in

2012 and 41 in 2011). However, in 2014 the number of transits dropped to 31. (Northern Sea Route Information Office 2015)

Figure 1 ***A graphical comparison between the Northeast Passage and the southern route***



The Northeast Passage in blue
The southern route in red

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In fact, several experts have questioned the potential of the Northeast Passage to emerge as a commercially feasible alternative to the Suez Canal due to several challenges related to the Arctic route. For instance, the infrastructure along the route is underdeveloped, lacking modern deep water ports and search and rescue capabilities. Navigation is challenging due to harsh weather conditions and free-floating ice, which may lead to delays in transport schedules. Furthermore, the jurisdictional disputes related to Arctic waters create political uncertainties. (Buixadé Farré et. al 2014) The demanding conditions also require special ice-capable vessels and icebreakers to escort their voyage. Moreover, the enforcement of safety

and environmental protection in the Arctic has remained rather heated issue internationally, and for instance environmental organisations have campaigned against Arctic oil exploration.

Consequently, due to its remoteness and harsh weather conditions, the Northeast Passage can be considered a riskier alternative to the southern route. Moreover, shorter distance may be offset by higher costs in ship construction and operation, although technological advancements can improve the potential to make the Northeast Passage an economically viable transit route. (Buixadé Farré et. al 2014) Russia has already invested in infrastructure along the route, for instance by opening search and rescue centres (Pettersen 2014a). In addition, the recently opened Port of Sabetta on the Yamal Peninsula is planned to become a multifunctional hub on the Northeast Passage, handling for instance oil and gas, metals, coal and grain (Pettersen 2015). Moreover, a further decline in Arctic ice cover may change the conditions in the region to be more favourable for shipping. Nevertheless, the Northeast Passage is not expected to emerge as a large-scale international transport route in the near future and without further large investments, for instance in the Arctic port infrastructure, satellite coverage and rescue system, let alone the construction of new vessels.

However, as a concrete attempt both to increase safety and protect the harsh environment in the waters surrounding the Arctic and Antarctic poles, the International Maritime Organization (IMO) has recently adopted the International Code for Ships Operating in Polar Waters – the Polar Code. The Polar Code is mandatory for ships operating in polar waters, covering the full range of design, construction, equipment, operational, training, search and rescue and environmental protection matters relevant to these ships (IMO 2014). Moreover, followed by the proposition of Norway and Russia, the Maritime Safety Committee has adopted a new mandatory ship reporting system “In the Barents Area (Barents SRS)” in 2012 (IMO 2013). Russia is also involved in the Arctic Council which is an intergovernmental forum for cooperation, coordination and interaction among the Arctic States, in particular related to issues of sustainable development and environmental protection in the Arctic (Arctic Council 2011).

As sea transportation is very important for Russia both in economic and strategic terms, the modernisation of transportation and logistics is also a priority for the Russian government. A considerable number of political measures have been taken to develop sea transportation, including seaports, such as Murmansk and Ust-Luga, and the related infrastructure. Comprehensive development of seaports into transport hubs, including transshipment

complexes as well as rail and road connections, is underway. (Finpro 2011) In addition to sea transportation, the development and expansion of inland waterway network, shipping and logistics is important for Russia, as it could increase transport accessibility of many Russian regions (Dekhtyaruk et. al 2014).

In securing the shipping routes and means, a domestic modern fleet plays an important role. Russia has been hit by the negative tendency of outflagging vessels under foreign flags as Russian legislation and bureaucracy are seen as disadvantageous by shipping companies. Currently 90% of Russian ships operate under foreign flags (Finpro 2011) and increasing the share of domestic vessels in the Russian maritime transport fleet is seen as strategic goal in the country (Dekhtyaruk et. al 2014). Another challenge for the Russian fleet is the age and condition of the vessels – majority of the existing fleet is obsolete and in need of rapid and broad modernisation (Finpro 2011). The average age of Russian vessels is 30 years whereas for foreign vessels it is only some eight years (Dekhtyaruk et. al 2014). Consequently, in order to respond to these challenges, Russia aims to diversify the legacy of the military shipbuilding and increasingly engage in building of civil vessels.

3 The current state of the Russian maritime and offshore industry

3.1 Key actors and their impact on the industry

Russian strategic industries are typically in the hands of state corporations. State corporations have been established since 2004 to several, strategically important industries to enable the state's control and strategic planning, enforce national security, as well as to facilitate economic development and diversification of production. State corporations, that enjoy a privileged position in the Russian business world, have usually swallowed up other companies into the corporation (Luukkanen 2011), making the structure of the industry more centralised – this applies to the Russian shipbuilding industry as well.

The shipbuilding industry is dominated by the state-owned United Shipbuilding Corporation (USC) which owns 80% of the Russian shipyards and is the largest shipbuilding corporation in the country (Lainio et. al 2015). USC was established by the Russian government in 2007 to solve the problems of the Russian shipbuilding industry. The creation of the company aimed at strengthening the state's control over the shipbuilding industry, facilitating the control of the funds allocated for the industry's development, restricting excessive

competition in the market and establishing vertically integrated communications between companies. (Finpro 2011; Staalesen 2013)

USC has since grown into an industrial giant, owning 45 shipyards and 14 design companies and employing 85 000 persons (Lainio et. al 2015). USC, accounting for 80% of all shipbuilding projects in Russia, integrates the government's military and civil shipbuilding, repair and maintenance subsidiaries in the western and northern parts of Russia and in the Far East. USC has main offices in Moscow and St. Petersburg and its subsidiaries are structured into three centres, the Western Shipbuilding and Repair Centre in St. Petersburg, the Northern Shipbuilding and Repair Centre in Severodvinsk and the Far Eastern Shipbuilding and Repair Centre in Vladivostok. (Finpro 2011; Doing Business in St. Petersburg 2014; Lainio et. al 2015)

USC is through its subsidiaries involved in R&D, design, construction, supply, repair, maintenance, upgrading, and recycling activities in the military and civil shipbuilding and offshore industries. Currently, the company is constructing 64 civil vessels. Regarding the future demand of the company, 458 civil vessels, of which 185 are related to Arctic offshore, are needed by 2030. USC aims to reach 50% local content in shipbuilding and 100% in ship design. (Finpro 2011; Lainio et. al 2015) USC also owns Arctech Helsinki Shipyard in Finland which was established in 2010 as a joint venture of Korean STX Europe and USC in order to unite the Finnish and Russian maritime clusters and respond to the growing demand for Arctic shipbuilding. In 2014, USC bought the remaining 50% of the company shares from STX Finland and became the full owner of the Arctech Helsinki Shipyard. (Arctech 2014a)

USC was expected to solve some critical issues undermining the competitiveness of the Russian shipbuilding industry, such as upgrading outdated production facilities and technologies (Finpro 2011). However, USC has not succeeded in modernising the shipbuilding industry as expected but on the contrary, has been criticised for its poor performance. The majority of the corporation's enterprises are continuously unprofitable due to outdated facilities, slow renovation, and more expensive and time-consuming shipbuilding processes compared to foreign yards. USC is also suffering from the ineffectiveness of its subcontracting chain which stems from the more general problem, namely the inefficiency of Russian state-owned corporations. (Pynnöniemi 2013) In fact, as state corporations enjoy a privileged position and are thus more or less immune to the laws of the market economy, they have not been forced to develop their efficiency (Luukkanen 2011).

Due to the strategic importance of the maritime sector, the Russian state is involved as a central actor in the shipbuilding industry's development as the main customer for vessels, the owner of the key shipyards, and the funding provider. In fact, direct and indirect state financing comprise an important source of funding for the Russian shipbuilding industry. For instance, the federal programmes for the development of civil shipbuilding and transport system in Russia provide direct state financing for modernisation of the shipbuilding industry and facilitate production in the form of vessel orders. Indirect state financing, in turn, is provided through direct vessel orders from state-owned companies, such as Gazprom, Rosneft and Sovkomflot. (Finpro 2011)

Moreover, both the Russian ministries and President Vladimir Putin are actively and publicly involved in the shipbuilding industry's development. For instance, USC has received a lot of criticism from the Russian government and President Putin, who has expressed his dissatisfaction with the quality and delay of orders, particularly related to the orders of the navy (President of Russia 2013). In May 2013, the head of the corporation was changed from Andrei Dyachkov to Vladimir Shmakov, only to be dismissed after less than a year in April 2014. Dyachkov had also served only for eleven months as the president of the corporation. In June 2014, Alexey Rakhmanov was appointed as the new president of USC. (The Moscow Times 2013; Bloomberg Businessweek 2014) Consequently, the recent turbulence in the USC's management reflects the difficulties and the problems of the corporation, as well as the dissatisfaction of the Russian government for the company's performance and incapability to modernise the Russian shipbuilding industry.

As reflected also in the structure of USC, the shipbuilding activities in Russia are currently concentrated on three clusters, the Russian Northwest, North and Far East. Most of the Russian shipbuilding activity is focused on the Russian Northwest – 80% of all activity is in the St. Petersburg area which is the centre of the Russian shipbuilding with 40 shipbuilding companies (Lainio et. al 2015). The region is also a centre of shipbuilding-related R&D, hosting for instance Krylov Shipbuilding Research Institute, the leading scientific research institute of the shipbuilding industry in Russia (Doing Business in St. Petersburg 2014).

Several large shipyards are located in the cities of St. Petersburg, Kaliningrad and Vyborg in Northwest Russia. The largest shipyard in St. Petersburg is the Admiralteyskie Shipyard by the Neva River. The USC-owned Admiralteyskie Shipyard is specialised in military vessels and submarines, as well as scientific and exploration vessels, search and rescue vessels and tankers, and its main clients include the Russian navy and state agencies. The

shipyard's turnover in 2012 was 452 million euros and it employs 6 000 people. Admiralteyskie Shipyard is constantly investing in yard modernisation and it has large facilities, such as three kilometres long yard, a machine workshop and design and engineering of its own. (Lainio et. al 2015)

Severnaya Shipyard in St. Petersburg is also in the ownership of USC. The shipyard builds both military and civil ships and is currently constructing several navy vessels and series of offshore service vessels. The turnover of the yard was some 319 million euros in 2012 and it has over 1 000 employees. Another USC-owned shipyard in St. Petersburg, Baltiysky Zavod, is focused on ice-classed vessels, large cargo vessels and naval ships. The shipyard is currently building nuclear icebreakers and floating nuclear power plants, including Russia's first floating nuclear power station "Akademik Lomonosov" to be used in the Arctic. (Lainio et. al 2015) The shipyard also participated in the construction of hulls for the Mistral-class helicopter carriers which the Russian navy ordered from France (Navaltoday 2012). The deal was later cancelled by France before the delivery of the Mistral ships to Russia due to the sanctions following the Ukrainian crisis (MTV 2015).

Almaz Shipbuilding Company, located in St. Petersburg, is a non-USC shipyard currently focusing on building series of crane and patrol vessels for the Russian coast guard. The shipyard, employing over 1000 people, has a full order book until 2018. Another non-USC shipyard close to St. Petersburg is Nevsky Shipyard, building various types of civil vessels, such as cargo and service ships and passenger vessels, as well as search and rescue vessels. The shipyard has both Russian and foreign clients. It also offers ship repair services for Russian ship owners. (Lainio et. al 2015)

Besides St. Petersburg-based shipyards, the Northwestern shipbuilding cluster also includes shipyards in Kaliningrad and Vyborg. Yantar Shipyard in Kaliningrad constructs both commercial and naval vessels and provides ship repair services. Yantar Shipyard has Polish and Lithuanian suppliers and has also cooperated with Finnish Arctech Helsinki Shipyard in building icebreaking emergency and rescue vessel Baltika for the the Russian Federal Agency of Sea and River Transport. (Arctech 2014b; Lainio et. al 2015)

Vyborg Shipyard in Vyborg is an international-oriented shipyard focusing on commercial projects, such as ice breakers, oil platforms, special purpose vessels and large LNG projects. The order book of the shipyard is currently full and it has outsourced block production to Klaipeda, Lithuania. Vyborg Shipyard has close cooperation relations with

Finnish companies, particularly with the other USC-subsidary Arctech Helsinki Shipyard. (Lainio et. al 2015) For instance, the shipyard is currently constructing a series of three icebreakers for the Russian Ministry of Transport, one of which is built together with Arctech Helsinki. Vyborg Shipyard is responsible for the basic design of the vessel and provides the purchasing of major components and 40% of the hull blocks. Arctech Helsinki, on the other hand, takes care of the construction, outfitting and commissioning of the vessel. (Arctech 2015)

Besides St. Petersburg, another important shipbuilding centre is Severodvinsk in Northern Russia in the Arkhangelsk region, hosting the largest and most powerful shipyard in Russia, Sevmash. Sevmash, which has the largest sheltered docks in Russia and 50 000 employees, is a closed yard with almost all production and expertise in-house. Sevmash has a vast scope of activity, ranging from its main focus of nuclear submarines for Russian navy to floating structures and offshore platforms, as well as civil vessels, such as tugs and barges. Besides shipbuilding, Sevmash is engaged in various types of activities, such as equipment manufacturing for defence, maritime and oil and gas industries, as well as ship and submarine repair and upgrading. (Lainio et. al 2015)

Zvyozdochka Shipbuilding and Shiprepair Centre is also located in Severodvinsk. It is the second largest shipyard in Russia with 15 000 employees. The traditional focus of Zvyozdochka has been on repair of nuclear submarines but the shipyard is now increasingly specialising in propulsion systems and offshore platforms. In particular, the company has been investing in propulsion manufacturing and produces world's strongest propellers for ice breakers, cruisers and submarines for both domestic and export markets. Zvyozdochka, like Sevmash, has production capacity, resources and expertise of its own but is still interested in cooperating with foreign suppliers as well. (Lainio et. al 2015)

Although the majority of shipbuilding activity is located in the western part of Russia, the development of the Far Eastern shipbuilding cluster has recently been a particular priority for the Russian government. As some of Russia's main oil and gas fields are located in the region, the shipbuilding cluster is to become the centre of knowhow and production capacities for the development of offshore projects. A central part of the industrial development of the region is the establishment of a new modern mega shipyard on the basis of Zvezda shipyard, originally a military shipyard in Bolshoy Kamen outside Vladivostok. (Staalesen 2014b) Upon completion, Zvezda is to become the largest shipbuilding complex in Russia, being able to produce both naval and commercial ships, as well as offshore

platforms, offshore construction vessels and ice-class vessels for the Arctic conditions (Lainio et. al 2015). The Zvezda project is estimated to be completed in 2018 with a total price tag of over 2 billion euros (Staalesen 2014b).

The responsibility for the development of the Zvezda project was originally given to USC but the project has not progressed as straightforward as anticipated. In 2013, Rosneft invested over 2 billion euros in the modernisation of Zvezda shipyard for civilian shipbuilding, as the oil company lacked yard space to build new tankers and oil platforms. Furthermore, in 2014 Rosneft signed an agreement with Gazprom, Novatek, Sovcomflot, Gazprombank, USC and the Ministry of Industry and Trade on the development of Zvezda in state-private partnership. In June 2015, USC was announced to have taken full control of the Zvezda shipyard as the Russian government handed over its share of the ownership to USC. (Staalesen 2014b; Moscow Times 2015e) The Zvezda project has also suffered from corruption scandals – for instance, in April 2015 the shipyard was reported to have lost 80 million euros to embezzlement (Moscow Times 2015b).

In addition to shipyards, there is also a wide range of suppliers of the maritime industry in Russia, such as engine, propulsion and machine manufacturers, machine workshops, design and engineering companies, as well as marine dealers and agents. Severnoe Design Bureau, located in St. Petersburg, is focused on designing both military and commercial vessels also for foreign customers. Rubin Design Bureau, also based in St. Petersburg, offers design and engineering services for offshore platforms and subsea structures. Both Severnoe Design Bureau and Rubin Design Bureau are owned by USC. St. Petersburg-based Shipbuilding and Shiprepair Technology Center is not owned by USC. It is a recognised research institute and a leading centre of shipbuilding technologies in Russia, planning and designing all new shipyards and modernisation projects of old shipyards in Russia. (Lainio et. al 2015)

However, with regard to certain ship components, the Russian shipbuilding industry is rather dependent on foreign suppliers. For instance, 70% of electronic equipment installed aboard in ships and 15% of other components used in shipbuilding are imported. (Moscow Times 2015d) Due to the economic sanctions, the country's shipbuilding industry has not been able to purchase the required components from western companies, leading to the suspension of some shipbuilding projects (Moscow Times 2015c). Furthermore, the Russian shipbuilding industry has been particularly dependent on the supply of engine turbines from Ukraine to power ships, and following Ukraine's decision to suspend defence-industrial cooperation with

Russia in 2014, several Russian military shipbuilding projects have been forced to put on hold due to lack of engines (Moscow Times 2015d).

To mitigate the effects of economic sanction on shipbuilding industry, President Putin has initiated an import substitution programme aiming at spurring the development of comparable domestic products. Moreover, Russian shipbuilding companies have been denied state funding for buying foreign equipment. Instead of importing complete products, they are encouraged to learn the required technologies from foreign companies and produce the components locally in Russia. (Moscow Times 2015a; Moscow Times 2015c) Deputy Prime Minister Dmitry Rogozin has even emphasised that Russian shipping companies should order all their new ships from domestic shipyards instead of foreign shipyards. According to Rogozin, even suspending the development of offshore fields would be better than allowing the orders and money to flow to foreign countries. (Motorship 2015)

Still, Russia is clearly in need of foreign maritime technologies. The Russian government hopes to attract foreign shipbuilding companies to establish production in the form of joint ventures with Russian companies registered in Russia, allowing the country to benefit from foreign marine technologies on conditions that would not violate the sanctions (Motorship 2015). In addition, a Russian maritime design bureau called Almaz is designing new military vessels aiming to replace ship models that have been dependent on foreign components (Bodner 2015a). Still, some of the imported components, such as the gas turbines produced in Ukraine, are very complicated and difficult to duplicate, and the quality of Russian-made alternative components is not always equivalent to western equipment. USC has now ordered engines from a Russian engineering company Saturn but launching their production in Russia is likely to take a few years and in the meantime, several important shipbuilding projects are on hold. (Bodner 2015b; Moscow Times 2015c; Staalesen 2015a)

The main end-users of the Russian maritime and offshore industry, the military and the oil and gas companies, are also important actors in the industry and influence its development with their demands for various types of vessels and offshore equipment. In fact, the military and the energy companies are currently competing for the capacity of the Russian shipyards. Russia has engaged into rearmament and due to growing military spending, a lion's share of the shipbuilding capacity is reserved for the orders of the navy. Military projects account for 80% of all Russian shipbuilding, placing a heavy burden to Russian shipyards and leaving little room for civil shipbuilding. According to Deputy Prime Minister Rogozin, military shipbuilding has expanded by 14% in 2014, whereas civilian shipbuilding

has grown only by 7%. Similar trend is expected to continue for several years, at least until 2018 when the volume of military orders will peak. However, this development reflects a nationwide trend as the share of defence industry is expanding in the entire manufacturing sector of Russia. (Bodner 2014)

On the other hand, the growing interest in Arctic energy resources has created a great demand for the related vessels and offshore structures among large Russian energy companies, such as Gazprom and Rosneft. In fact, frustrated with the lack of civil shipbuilding capacity, energy companies have started to invest in modernisation of shipyards, such as Zvezda, to gain yard space for the construction of maritime technology needed for oil and gas production and transportation (Bodner 2014). In addition to energy companies, the shipping company Sovcomflot has publicly stated its support for the development of civil shipbuilding in the Russian Far East (Tass 2013). In fact, Sovcomflot is one of the most important players in the Russian shipbuilding industry – according to a forecast for new shipbuilding in 2015–2020, Sovcomflot is to order 30 vessels of the total 70 new vessels to be ordered (Lainio et. al 2015).

To speed up the modernisation of Zvezda shipyard, Rosneft has urged all Russian energy companies to place their offshore technology orders at Zvezda. Rosneft has also proposed incentives for companies to decrease the use of foreign technology, such as a special taxes and amendments in offshore license terms for companies using foreign-made vessels and offshore equipment. (Staalesen 2015b) Indeed, for the time being, the main actors in the Russian maritime and offshore industry seem to agree on favouring the domestic industry but the best development directions for the industry remain unclear.

3.2 Competitiveness

Despite the political initiatives to spur the development of commercial shipbuilding, the growth of the civil shipbuilding industry has been rather modest in Russia during the last fifteen years. The decline in naval shipbuilding caused by the collapse of the Soviet Union did not result in an equivalent increase in commercial production. (Motorship 2013) The main share of the capacity of Russian shipyards is still reserved for military production, military projects accounting for over 80% of all Russian shipbuilding (Bodner 2014).

This situation is not likely to change in the near future as following the growing tensions in the international atmosphere, Russia is investing 500 billion euros into rearmament, a quarter of which is allocated for the navy. The Russian government has also cut the funding

for the state programme for the development of Russian shipbuilding industry until 2030 by 40% in order to reserve shipbuilding capacity for the orders of the navy. (Bodner 2014) Moreover, the weak economic situation has also forced Russia to cut down the state expenses not related to defence (BOFIT 2015) which may also affect the funding of the civil shipbuilding industry.

Besides the changing development directions of the Russian shipbuilding industry, the crisis in Ukraine and the following sanctions on Russia have complicated the implementation of maritime and offshore industry projects in Russia. Export of products and services destined for deep water oil exploration and production, arctic oil exploration or production and shale oil projects to Russia have been prohibited and a similar ban has been ordered to exports of dual use goods and technology for military use (European Union 2015; U.S. Department of State 2014). The EU and the US have also limited the access of several Russian state-owned banks, defence firms and energy companies to capital markets – Rosneft has been banned both by the EU and the US, and also Gazprom, Lukoil and Novatek are in the US's list of sanctions. Sanctions complicate the companies' possibilities to attract foreign financing and are affecting the development of energy projects as well. Furthermore, the US has also included USC in its list of sanctioned entities, prohibiting all transactions with the company. (Spiegel & Dyer 2014; BBC News 2014)

Consequently, the sanctions have a negative impact on the Russian maritime and offshore industry as they complicate companies' possibilities to attract foreign financing and prohibit exports of products and services and technology transfer to Russia if they are related to defence and oil industries. The sanctions have already caused lack of ship components in Russian shipyards, delaying the construction of new vessels, and led to a cancellation of a war ship order from France (Moscow Times 2015c; MTV 2015). The Arctic energy projects are also being delayed as western energy companies have withdrawn from the sanctioned projects, but also because the decrease in oil prices has weakened the profitability of Arctic offshore oil projects (Milne et. al 2015).

Even regardless of the sanctions, Russian civil shipbuilding industry is currently facing several difficulties. The existing shipyards are in need of rapid renovation as the investments in their modernisation have been practically non-existent until recent years. The major production facilities of the industry are completely outdated and fail to meet modern standards, and the facilities of the suppliers of the industry, such as producers of spare parts and equipment, are in need of modernisation as well. The production capacities of the

existing shipyards are also limited – in civil shipbuilding, only small- and medium-tonnage ships can be sufficiently produced to meet the demands of the state and domestic companies. However, whereas demand for heavy-tonnage ships is growing, the Russian shipyards can respond to this demand only partially, as they lack the necessary production facilities. (Finpro 2011; Motorship 2011)

Consequently, with regard to shipbuilding technologies, knowhow and production equipment, Russia is suffering from technological inferiority compared to advanced shipbuilding nations in Europe and Asia. The current Russian expertise is mostly restricted to military shipbuilding, for instance nuclear submarines and naval vessels, and the industry is not export-oriented or even present at the international market. (Finpro 2011; Motorship 2013; SmartComp 2013) Although benefitting from low labour and steel material costs as well as advanced metal processing, the Russian commercial shipbuilding capacity is focused on building hulls, and advanced technologies and equipment are usually imported. As a result of technological inferiority, as well as weak design decisions and work arrangements, the productivity of the shipyards has remained at low level. In fact, labour intensity of the industry is three to five times higher and the time needed for vessel construction two to two and half times as much as abroad. In addition, the Russian shipbuilding industry is suffering from lack of highly qualified work force, and attracting skilled individuals, particularly young and prospective employees, has been further complicated by low general demand and uncompetitive salary levels. A clear indication of the domestic shipyards' low competitiveness is the fact that Russian private companies also prefer foreign shipbuilders. (Finpro 2011; Motorship 2011; BOFIT 2012; SmartComp 2013) Consequently, with their inadequate and outdated production capacities, the Russian shipyards are unable to respond to the increasing vessel orders.

The need to develop civil shipbuilding industry has been recognised by the Russian state as well. Attracting private investments in the industry and developing international cooperation to modernise the production capacities have been the main aims of the state support. (Finpro 2011) However, the various government initiatives to provide state support for the shipbuilding industry, for instance by cutting production costs at domestic shipyards and reducing payback period for locally-built ships, as well as amendments to taxation and labour codes, have yet proven ineffective (Motorship 2013) and many governmental projects have been closed due to lack of resources. At the same time, the country has failed to create favourable conditions for private investors. (Gritsenko 2013) Russia's unfavourable financial

environment, mainly the lack of sophisticated long-term financing facilities, significantly complicates the possibilities to raise funds inside the country (Finpro 2011).

Consequently, the aspired state-private interaction has not yet brought significant results in terms of increased competitiveness. A certain conflict of interests can also be found between public and private sectors, i.e. the government and the maritime industry, as the government wants to maintain control over the industry and its development due to the strategic nature of many aspects related to maritime affairs (Gritsenko 2013). Moreover, the government policies seem to have focused more on collecting the relevant actors inside the same holding instead of supporting the formation of natural business networks and clustering (Laaksonen & Mäkinen 2013). Furthermore, the strong roles of both the Russian state and the military in the country's maritime industry have hindered commercial shipbuilding from developing. Since the shipbuilding industry has been operating in an environment in which it has not been faced with competition and large shipyards have been mostly managing on the state's orders, the industry has not been forced to develop its cost efficiency, technologies and knowhow.

3.3 Business opportunities for foreign companies

Russia's urge to reassert its position in the global maritime industry and to exploit its Arctic regions both in energy production and sea transportation has been seen to create a favourable situation for foreign companies. Regardless of the aim to localise production in the Russian shipbuilding industry, international cooperation is needed in order to close the technological gap with its European and Asian rivals and bring production capacities of the country's shipyards up-to-date (Finpro 2011). In fact, modernisation projects are underway at 20 shipyards in Russia (Lainio et. al 2015). Moreover, as the Shipbuilding Industry Development 2013–2030 programme aims at a fivefold increase in the Russian civil shipbuilding output, it certainly foresees new business opportunities also for foreign maritime companies (Finpro 2014).

The Russian government has aimed to establish joint ventures with foreign companies in order to facilitate technology transfer and simultaneously improve the quality of Russian vessels. Currently, the aim is to attract foreign shipbuilding companies to establish production in Russia in the form of joint ventures with Russian companies. Such joint ventures, registered in Russia, would comply with the objective to localise production and simultaneously would not violate sanctions. There has been discussions on such

cooperation for instance with Germany, China and South Korea. (Motorship 2013; Motorship 2015)

The modernisation projects in Russian shipyards, such as construction projects, as well as upgrading machinery and infrastructure, could provide business opportunities for foreign companies. Modern and functioning assembly and welding tools, contributing to increase in productivity, are also in demand. Furthermore, ship engineering and design, including design software, and various kind of equipment for vessels, such as propulsion systems and marine engines, is needed in shipbuilding projects, as well as cables, pipes and HPAC turnkey solutions. Shipyards building passenger vessels are also interested in interior outfitting and other indoor solutions, for instance accommodation modules, as well as for instance doors and windows. Shipyards also need expertise on various safety systems, such as firefighting, alarm and evacuation systems, as well as oil spill recovery systems. Knowhow in Arctic, offshore and subsea technologies, for instance icebreakers and ice-class vessels as well as modular and cabin solutions for living and working in offshore platforms in harsh conditions, is also in great demand at the moment due to the development of Arctic oil and gas projects and the Northeast Passage. Moreover, Russian companies wish to achieve knowledge transfer related to Arctic knowhow as well – for instance, in order to facilitate the development of Zvezda shipyard, Rosneft is interested in ice-class shipbuilding education export from Finland to Far East University. (Finpro 2014; Export Finland 2015; Lainio et. al 2015) The development of the Northeast Passage also creates business opportunities for foreign maritime logistics companies which are able to provide innovative solutions for logistic chains.

Many Russian shipyards make their purchases via tenders which increases transparency, and in some cases tenders are even available at companies' websites. They usually also have previous experience in foreign suppliers. On the other hand, Russian shipyards are normally allowed to purchase from foreign companies only for civil projects, and the dominance of military projects in Russian shipbuilding limits the opportunities offered for foreign suppliers. Moreover, particularly large shipyards have significant in-house production as well as knowhow and resources of their own, limiting the need for outsourcing. Some shipyards are also hard to access, particularly the ones with a military focus, and the persons responsible for purchases difficult to find without existing contacts. (Finpro 2014; Lainio et. al 2015)

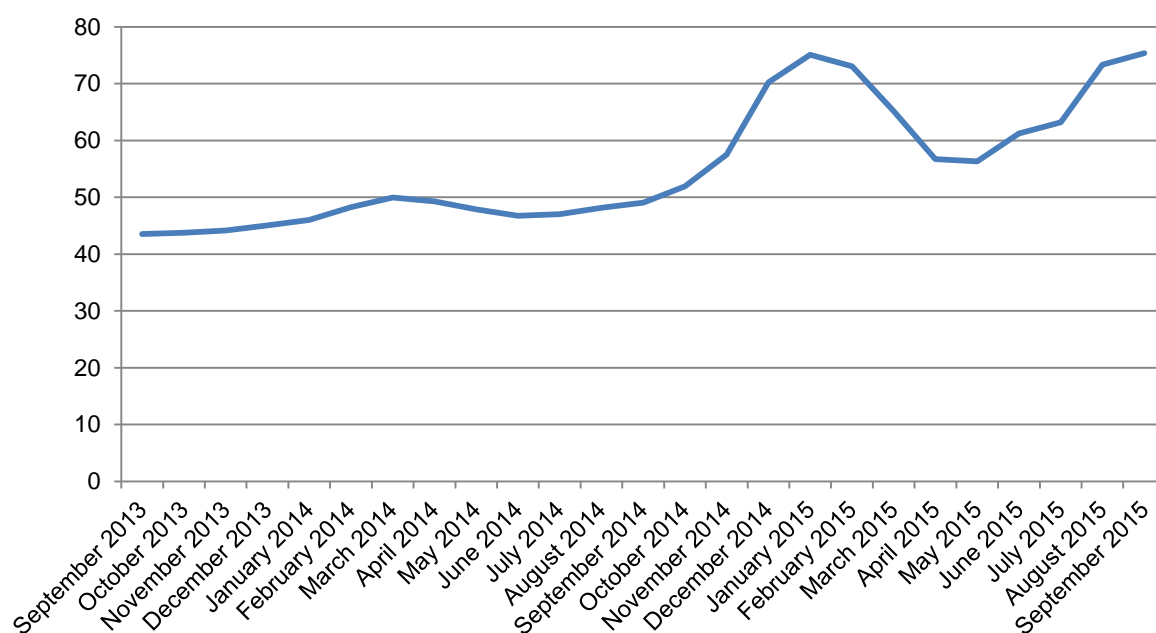
The demand in the Russian maritime industry for foreign products and services has been recognised abroad as well. For instance Finpro, the Finnish export promotion agency, is actively involved in identifying new business opportunities for Finnish maritime companies, particularly SMEs, and encouraging and helping them to enter the Russian market. Finpro has surveyed the needs of the shipbuilding and offshore industries in Russia and identified shipyards and other maritime companies that could have demand for Finnish maritime products, technologies and expertise as well as an ability to purchase them². According to Finpro, this project has shown that there is plenty of demand for Finnish maritime and offshore expertise in Russia, particularly related to Arctic technologies. (Finpro 2014)

However, although being attracted by Russia's business opportunities and growth potential, foreign companies often find the country's business environment challenging in relation to the expected profits (Laaksonen 2012). In addition, entering the Russian business networks is complicated for foreign companies without existing contacts to Russian business world (SmartComp 2013). For instance, the complicated regulatory and operational environment, corruption, and the low research and innovation capacity are among the main obstacles for foreign companies. Ernst&Young's Russia attractiveness survey 2013 proposes four main measures to be taken in order to make Russia more attractive for business. Firstly, operational barriers should be reduced, particularly when it comes to reducing bureaucracy, improving the effectiveness of the rule of law and increasing the transparency of business regulation. These are matters of concern for new investors and existing business alike. Secondly, Russia should focus on encouraging R&D and innovation, particularly by facilitating R&D collaboration between Russian and foreign companies on the one hand and between universities and industry on the other. Thirdly, enhancing the regional attractiveness would be important as the awareness of foreign companies about business opportunities in Russia is often limited to the biggest cities, mainly Moscow and St. Petersburg, and they remain unaware of what other Russian regions could offer. Fourthly, improving the business education in Russia, for instance by establishing joint programmes with foreign universities, would be important, as well as improving the English language skills and increasing internationalisation. In all these four matters, the Russian government plays a key role. (Ernst&Young 2013b)

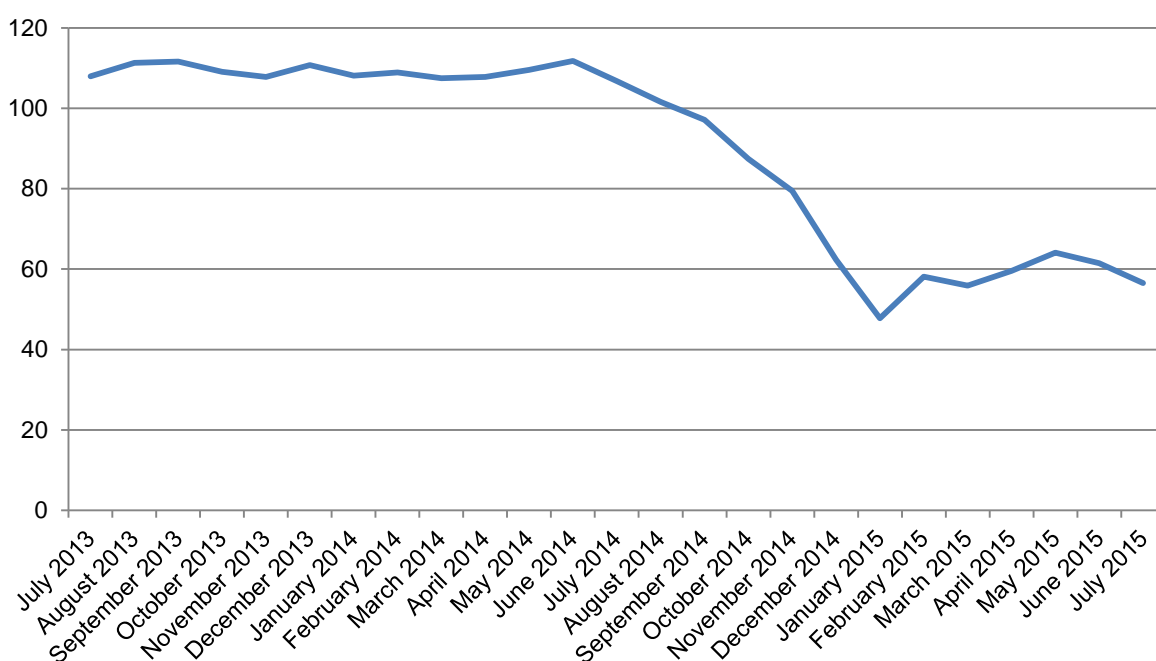
² For more information, see Lainio, U., Vetrova, A. & Zak, A. (2015) Shipbuilding in Russia & Azerbaijan (available at <http://www.slideshare.net/FinproRy/shipbuilding-in-russia>), or Lainio, U. & Zak, A. (2015) Shipbuilding Business Opportunities in Russia & Azerbaijan (available at <http://www.slideshare.net/FinproRy/shipbuilding-business-opportunitiesin-russia-and-azerbaijan>).

Moreover, the current economic situation in Russia has set challenges for foreign companies and their trade with Russia. For instance, the rouble's low rate against the euro (see Figure 2) has weakened the purchasing power of Russians and stalled investments in the country. The low world market price of oil (see Figure 3), on the other hand, has weakened the lucrativeness of the Russian Arctic energy projects. Finally, the economic sanctions imposed by the EU and the US have restricted business cooperation between Russian and western companies in the maritime and offshore sector by prohibiting exports and technology transfer to Russia if they are related to defence and oil industries.

On the other hand, the sanctions will introduce new opportunities for Asian companies as Russia aims to seek alternative suppliers from China and South Korea. Particularly Chinese maritime companies may benefit greatly from increasing orders as they can boost the companies to develop their skills and knowhow. As a result of this development, Chinese suppliers may reach a new level of competitiveness and thus become tough competitors for the western maritime companies even in the field of advanced technologies and specialised products. Consequently, if the orders of the Russian maritime industry are given to Chinese and South Korean companies and the products they supply are satisfying the needs of the Russian industry, they may replace the western suppliers. Furthermore, the current trend of favouring domestic suppliers particularly in public procurement restricts the business opportunities of foreign companies. As a part of national strategy, Russia is now intensively developing local production in the maritime industry and is limiting the share of foreign content in shipbuilding projects.

Figure 2 *The average rate of the rouble (EUR/RUB), September 2013–September 2015*

Source: Kauppalehti 2015

Figure 3 *Europe Brent spot price for crude oil (dollars per barrel), July 2013–July 2015*

Source: EIA 2015

Figure 4 *SWOT-analysis of the Russian maritime and offshore sector*

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • Low labour and steel material costs • Advanced metal processing • Expertise in naval shipbuilding and ship hulls • Expertise in nuclear technologies, e.g. nuclear submarines • Political incentive and funding to develop the maritime industry 	<ul style="list-style-type: none"> • Lack of knowhow, advanced technologies and equipment related to commercial shipbuilding • Lack of qualified work force • Low productivity • The technological gap with other shipbuilding nations • Outdated Russian fleet • Dominant roles of military shipbuilding and the state hinder the development of civil shipbuilding • The Russian maritime industry is not export-oriented or present in the international market • Lack of clustering and natural business networks • Challenging business environment
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Significant investments allocated for renewing the fleet and the development of the shipbuilding industry • Increasing international cooperation • Growing interest in Arctic energy resources and the development of the Northeast Passage create a demand for the related vessels and offshore structures 	<ul style="list-style-type: none"> • The government's development plans fail to materialise effectively • The economy's dependence on energy revenues guides the development of civil shipbuilding • Due to current rearmament, military projects dominate in shipyards • The delay in Arctic energy projects due to sanctions and low oil price • Sanctions complicate companies' possibilities to attract foreign financing • Sanctions prohibit exports of products and services and technology transfer to Russia in certain sectors

Source: modified from SmartComp 2013.

4 The perceptions of Finnish SMEs on the Russian maritime and offshore industry

4.1 Overview on the companies' activities in Russia

The involvement of the interviewed SMEs³ in the Russian maritime and offshore industry varies greatly. Some companies have a long history of operating in Russia and they have started their trade already with the Soviet Union. Most of the companies have established their business contacts to Russia during the 1990s or 2000s and have been trading with Russia more or less regularly ever since. A few companies, on the other hand, are currently in the process of entering the Russian market. Moreover, some companies with a long business experience in Russia have left the country as the trade has waned. Some, on the other hand, have not been able to enter the Russian market regardless of hard efforts, and have decided to turn to other markets instead.

For some companies, the trade with Russia is very important in terms of revenues whereas some are practicing only small-scale trade. Furthermore, some companies do not have direct exports to Russia but are only indirectly involved in the Russian market through their clients. These clients are often large maritime and energy companies which purchase products or services from the interviewed companies and include them in their supplies to Russia. In fact, indirect exports to Russia are quite important for some of the interviewed companies. In addition, several companies have both direct and indirect exports to Russia.

The current political and economic situation in Russia has led some companies to abandon the country at least temporarily. On the other hand, some companies aim to maintain their business contacts and continue their trade to Russia either directly or as subcontractors of larger companies, and some are even actively developing their operations in Russia for instance by participating in trade fairs and searching for new customers there. Some of these companies are experienced in operating in Russia and count on their existing contacts whereas some have just become interested in the market for instance following cooperation requests from Finnish intermediaries, such as consultants, or straight from potential customers in Russia. Based on the interviews, it seems that the earlier experience in Russian trade is not a determining factor in whether a company is currently withdrawing from

³ 20 Finnish SMEs, which have either been operating, are currently operating or are trying to enter the Russian maritime and offshore industry, were interviewed for this study. See Appendix 1 for a detailed description of the interviews.

or proceeding in Russia. Instead, the company's specific field of operation, as well as the director's attitude and expectations of the future prospects for the Russian market play an important role.

4.2 Challenges

Nearly all interviewed companies described the current political situation as the main challenge for doing business in Russia. The political risk is seen as the main risk factor in operating in Russia and risk management is viewed to be very difficult for SMEs with very limited resources. Besides the political situation and partly related to it, the current economic situation is among the main challenges mentioned by the companies. The rouble's decline against the euro, caused by the plunge in world oil prices and the economic sanctions imposed on Russia, is considered as the main obstacle for the trade as the Russian customers cannot afford to buy products or services from Finnish suppliers. The economic decline in Russia has also stalled energy and offshore projects there and many aspects of the projects are even under sanctions, which have prevented the Finnish maritime and offshore companies from participating in these projects. In fact, *there is nothing going on in Russia right now* was a recurrent sentence in the discussions with the case companies.

Consequently, more than half of the companies consider the unstable situation in Russia to create such risks for them that they have either cut down or suspended operations there, for instance by not actively seeking customers or suspending local presence in Russia, as well as by shifting their focus to other geographical markets. The crisis in Ukraine and the resulting political and economic instability have in some cases caused rather rapid shifts in the companies' export strategies – one interviewee even mentioned that they had *thrown in the towel* regarding Russia right after the crisis in Ukraine flared up.

Several companies also mention that although they continue to supply the Russian maritime and offshore industry indirectly by selling their products and services to Finnish or foreign export companies, they are not actively trying to engage in direct export activities to Russia due to the current political and economic situation. The indirect exports are considered less risky to SMEs because they are not selling their products or services directly to Russian companies but to a Finnish or foreign client, which then bears the risk of trading with Russian customers. However, these activities have also suffered from the rouble's decline and the weak financial situation of Russian companies, which have stalled the investments and frozen the development of the Russian energy and offshore projects. On the other hand,

regarding the political risk in Russia, some interviewees emphasised that political risk is present in many other markets as well and always needs to be assessed.

Although the current political and economic situation in Russia emerged as the main challenge from the discussions with companies, other challenging issues were raised as well. Some of these challenges derive from the Finnish companies themselves, whereas the others are industry-specific, and some, on the other hand, are clearly related to Russian market situation, business practices and cultural differences. In general, interviewees acknowledged that Finnish SMEs are very small on an international scale and have limited resources for operating in international markets. Therefore they have to carefully consider where to allocate their resources, and if penetrating the Russian market is viewed particularly challenging and resource-consuming, they may choose to invest in other markets that are found easier to operate in and more likely to generate profit.

Another issue which is partly related to the shortage of resources and partly to the Finnish culture and national character is the lack of sales and marketing skills in SMEs. Several interviewees admitted that Finnish SMEs have very skilled engineers and high quality technical knowhow but do not invest enough in sales and marketing expertise and thus, cannot market themselves efficiently to potential customers. All in all, these challenges emerged from the discussions as typical for Finnish SMEs in general, and not only related to operating in the Russian maritime and offshore industry.

The offshore sector was perceived as particularly challenging for SMEs as operating in the offshore industry is seen as very resource-consuming due to various quality requirements and certificates. Getting into energy and offshore projects also requires a certain degree of presence in the target country due to the strategic nature of the industry, for instance establishing a local branch, subsidiary or joint venture, for which SMEs rarely have enough resources. Moreover, large international energy companies operating in offshore projects tend not to negotiate with small companies about partial deliveries but instead buy comprehensive solutions from large firms, and therefore Finnish SMEs would need to cooperate with other companies in order to get into these projects. However, as Finnish companies in general have rather limited experience on offshore projects, they also lack references needed to be invited to participate in offshore projects. However, the interviewed companies highlighted that these challenges are more industry-specific than typical for Russia alone – particularly energy industry as a strategic industry is always connected to national interest and politics.

According to the interviewed companies, a major challenge for the competitiveness of the Finnish companies in the Russian maritime and offshore industry is the high cost level of the Finnish industry and the related expense of the products and services. Even in a stable economic situation, the Finnish suppliers appear expensive in a comparison to Russian or for instance Chinese companies, and the weak rouble has made the difference in price even more significant. According to experiences of two interviewees, Russian customers often value price more than quality and Finnish companies cannot compete with Chinese or Russian firms for price. In addition, according to a market survey conducted by one company, the capacity of mechanical engineering industry is rather sufficient in Russia and there is no demand for imports in that sector, particularly if they are more expensive than domestic engineering in Russia.

Moreover, the political pressure to localize production in strategic industries in Russia complicates the procurement of goods from foreign companies as they need to be separately justified and often only products that are not offered by Russian manufacturers can be bought from outside. A possible solution that came up in the discussions for meeting these domestic content requirements would be to establish a joint venture or subsidiary in Russia. However, investing in Russia can be considered too risky for SMEs.

Logistical challenges related to transportation and customs regulations were also brought up by several companies although protective tariffs were seen to have declined a bit along with Russia's WTO membership. Due to the long and time-consuming logistics chain between Finland and Russia, meeting the customer's needs was considered to be difficult, and it requires mutual commitment to the deal and careful documentation of all phases of transportation to successfully finish the process.

Various challenging issues related to Russian market situation and business practices, as well as cultural differences between Finland and Russia were also raised in the discussions with companies. All sorts of opinions were presented – some of the interviewees were sharply critical towards the Russian politics, society and business life alike whereas the others had a neutral or positive attitude towards the neighbouring country. The criticism fell particularly on the defects in the legal system and the lack of adherence to agreements and rules. The issue of corruption divided the interviewees – some saw it as one of the most significant challenges pervasive in the whole Russian society whereas the others either did not mention it at all or told that they had not experienced anything related to corruption in Russia.

In addition, some of the interviewed service providers mentioned that Russia is a challenging country for service providing companies, particularly in the industrial sector. Purchasing services outside is not yet a common practice in Russian industrial companies, particularly because there is oversupply of workforce and a need to rationalise production inside the companies. One interviewee also mentioned that Russian companies tend to acquire the ideas and methods from the foreign service provider during the first deal and afterwards establish a company of their own based on the learning experience. The companies that supply products to Russia, on the other hand, emphasised that advance payments are necessary to avoid risks when trading with Russian companies.

The interviewed companies viewed the importance of the personal relations and contacts as one of the major differences between Finnish and Russian business cultures. Forming contacts to Russian businesses, finding the right customers and gaining their trust were seen particularly challenging at the beginning, when entering the market. It was also perceived as a long process that requires patience and local presence. However, several interviewees emphasized that as soon as one succeeds to get in to the Russian business world, widening the contact network is easy. One interviewee also mentioned that the business culture is changing in Russia as well – the more traditional businessmen value the personal relationships as before but the younger generation that has often received its education in European or American universities has adopted the western business culture. Moreover, the importance of personal relations was not viewed as a problem but as Russian customs which Finnish companies have to respect and adjust to if they wish to operate in Russia. *When in Rome, do as the Romans do*, as two interviewees put it.

Bureaucracy and red tape, complicated trading processes and hierarchical organisational structure in companies were also mentioned as challenging but they were not considered as hindrances for cooperation with Russian businesses. The lack of common language was also mentioned as a challenge when communicating with Russian companies but the knowledge of English was seen to vary a lot in different enterprises and industries. The differences in ratings, standards and other systems in Russia were also brought up by several companies. Consequently, due to language and other differences, many of the companies emphasised the importance of having personnel that speaks Russian and is familiar with the Russian market when operating in Russia. This was seen helpful also in searching for contacts and establishing relations to Russian companies. All in all, the interviewees highlighted the importance of being present in Russia even if one would not

succeed in doing business immediately – it was considered to require persistence and patience.

4.3 Opportunities

The interviewed companies considered Russia's large maritime and offshore industry to provide a lot of opportunities for Finnish companies. The demanding industries with strict safety and quality standards and requirements for careful documentation, such as the energy, offshore and maritime industries, were seen as particularly lucrative for Finnish enterprises with state-of-the-art expertise in these fields. For instance, the offshore projects in the Russian Far North could provide opportunities for Finnish companies with Arctic knowhow. In these industries with critical safety aspects, advanced technological knowhow and quality matter more than price, which can provide competitive edge for Finnish companies specialised in their own niches. Several interviewees pointed out that if a Finnish company can supply the needs of the Russian industries, there will be plenty of opportunities and cooperation possibilities available.

Some interviewees pointed out that the Russian maritime industry is in the need of modernisation and the equipment is often outdated due to which the industry is suffering from low productivity. Thus, there is great demand for modern, functional products that can improve productivity, and which Russian manufacturers are unable to produce by themselves due to the lack of related knowhow and technologies. The call for high-quality basic products, such as tools, is so huge that it could offer trade for Finnish companies for several years. Moreover, besides maritime sector, the inland water transportation sector is in need of modern vessels and various technical solutions related to them.

According to the interviewed companies, Finnish firms could also provide specialised maintenance and repair services which Russian ones cannot offer. For instance, Finnish companies can offer comprehensive packages related to the product's whole life cycle, including the product itself, the equipment related to its use, as well as the maintenance and repair services. Selling not a bare product but comprehensive service packages would also further the customer's commitment to the supplier and lead to a more long-lasting business relationship. Some companies also pointed out that there is a great need for knowledge and technology transfer in Russian companies but the interviewees' opinions varied if it would benefit both the foreign and Russian company, or only the Russian side.

All in all, the interviewees saw the strength of the Finnish companies in specialisation and developing their expertise in some narrow field to be the best in the world. As they cannot engage in price competition with companies from countries with lower level of costs, their asset lies in high quality products and services, and thus providing Russian companies with technologies and knowhow which the Russians do not possess.

4.4 Cooperation

The interviewed companies cooperate in various ways with other Finnish companies, foreign enterprises, export promotion organisations and other actors in their international operations. Various forms of cooperation and networking are seen as particularly important for SMEs with limited resources and negotiation power. In general, the companies had two ways of seeking resources to internationalise: firstly, with the help of outside agents, such as export promotion organisations, and secondly, through inter-firm networking, for instance marketing and sales cooperation, information exchange and common offers.

In fact, several companies mentioned that they have cooperated with other Finnish or foreign companies in order to better succeed in the Russian market. Sometimes the initiative for cooperation comes from the companies themselves as they consider it would help them in gaining ground in Russia – in these cases they often wish to cooperate with a firm that already has strong experience in operating in Russia. However, sometimes customers demand knowhow or packages that companies do not have which then leads companies to look for complementary partners. In fact, in the maritime and offshore industry customers often look for suppliers that can offer comprehensive packages for their projects and consequently, it is nearly necessary for SMEs either to join their forces or to cooperate with larger companies if they wish to participate in competitive biddings in the industry. Moreover, large international energy companies rarely negotiate with small enterprises and therefore it is very challenging for SMEs to get in to their supplier networks. On the other hand, some companies considered their field of business not necessitating cooperation, such as common tenders, with other companies, for instance due to their narrow specialisation and particular product or component they are selling.

Nevertheless, majority of the interviewed companies were either practicing cooperation in marketing and sales with other companies or acknowledged the need for such cooperation. Shared stands in trade fairs and common retailers in Russia were mentioned as practical examples of such cooperation. Due to the geographical vastness of Russia, it is very resource-demanding for companies to be present in different parts of the country, and

therefore cooperating in marketing activities and having common retailers were considered an efficient way to save resources for SMEs. Cooperation with other companies was also viewed useful in terms of risk sharing. In addition, some companies were exchanging information and sharing contact networks with their partner companies, for instance in order to reach a broader network of potential customers with their products.

In addition to informal cooperation, some of the interviewed companies have established more stable forms of cooperation with other companies, such as joint ventures or common sales and marketing companies. Common sales and marketing companies have export or marketing managers who are coordinating the group and searching for potential projects and customers in the target area. These groups of companies have regular meetings, common strategic goals and marketing and sales cooperation. However, resource and knowledge exchange within the group is relatively rare.

Some companies also cooperate within the group or concern they are a part of. In these cases the cooperation is usually more regular and intensive, for instance resource and knowledge exchange, since the relationship between companies is less competitive if they belong to the same organisation. In fact, one interviewee mentioned conflict of interest as an obstacle for cooperation with companies operating in the same field. On the other hand, it was also brought up that Finnish companies are too afraid of cooperation with other companies and suspicious of the others to supersede them. However, cooperation at some form was found almost necessary for SMEs in order to succeed in the international markets.

Many of the interviewed companies had experiences on export rings as a forum for cooperation. It was widely acknowledged that export ring is a resource-demanding form of cooperation in which the company's own activity plays a key role – if you join in the ring, you have to invest in it. Some companies even acknowledged that they have not joined an export ring due to lack of resources. The composition of the ring, both participating companies and the leader, was seen as vital in regard to the success of the ring. The activity and commitment of all participating actors but in particular the leader was essential in recognising the opportunities and finding the right customers and projects for the ring. Companies had both positive and negative experiences on export rings: some saw them as an efficient way of promoting companies' internationalisation and cooperation whereas the others had not benefitted from them as expected, for instance due to lack of synergies among the participating companies or the incompetence of the leader. Moreover, as the

export rings usually last only two or three years, they were also viewed rather short-term for time-demanding internationalization activities.

Most of the interviewed companies had experiences on cooperation with export promotion organisations. The services offered by export promotion agencies are mostly subject to charge but can be state-assisted as well – they, for instance, carry out market surveys and offer assistance in market-specific issues as well as organise export promotion journeys and participation in trade fairs. Interviewed companies had found their services particularly useful in opening doors to other markets, providing valuable contacts, helping in finding potential customers and even organising meetings with them. Several companies admitted that these services have been of monetary value to them and can even have led to concrete deals. However, as always, contrary views were also expressed – some companies were very unsatisfied with the services provided by export promotion agencies, finding them for instance not bringing any additional value for them or the price-quality ratio not meeting their requirements.

The interviewed companies are receiving cooperation offers quite often but they are considering them very carefully. The choice between whether they join in or not is affected by many factors, such as the other companies involved in cooperation, their own role in cooperation, the aims set for the cooperation and particularly the leader of the group. In addition, the previous experiences in export cooperation seem to affect the willingness to get involved with new cooperation initiatives. Companies that have previously benefited from export cooperation are more likely to join new initiatives than companies having negative experiences. However, some interviewees had also learned their lesson from the failed export cooperation and are currently creating new cooperation from better premises, such as more committed partners and qualified leader.

In general, the interviewed companies had rather few contacts to Russian actors. Networking with administrative or governmental bodies was not considered particularly useful – instead, companies expressed their desire to keep out of politics and focus on business only. Cooperation with officials was mainly limited to meeting of mandatory requirements and standards. Regarding the cooperation with Russian enterprises, some companies mentioned that good relations with Russian design companies can be useful in order to get references for Russian shipyards or status as a preferred supplier for certain projects from them. Some companies have also had common projects or established joint ventures with Russian firms in order to better succeed in winning bids and getting in to large

and strategically important offshore projects. The interviewed companies that have indirect exports rarely communicate directly with the Russian end users – instead, the client company takes care of all communication with the end user. However, direct communication with the end customer would sometimes be preferred in order to better meet the customer's demands.

Lastly, it was brought up that in spite of various export promotion services available, internationalisation in the end depends on the company itself. Favourable setting can be offered from outside but sales activities have to come from companies themselves who are the best experts in their own fields. Internationalisation is also very resource-demanding and requires investing a lot of time and money if one wishes to gain ground in international markets – this applies not only to Russia but every market. Regardless of the field of business or the geographical location of the market, it will always take a long time to form business contacts and build trust, and a company should not expect to immediately succeed in closing deals.

4.5 The future

Most of the interviewed companies believed that the current political and economic situation in Russia is transitory. At some point, the sanctions will be lifted, the political situation will normalise and the Russian economy will start to grow again. Consequently, although the current situation is seen as a hindrance for operating in Russia, the interviewees were rather confident of the future opportunities for Finnish companies in the Russian maritime and offshore industries.

It was mentioned couple of times that Russia is the neighbouring country of Finland and thus among the geographically closest export markets for Finnish companies, to which it is also easy and fast to travel. The Finns have traditionally had good connections to Russia and consequently it was believed that there will always be trade between the countries. However, due to the sanctions and political instability, the business is not currently functioning as usual, and Finnish companies are waiting for the political situation to calm down and the EU-Russia relations to normalise in order to avoid risks. While waiting for this, the companies recognised the importance of following up the developments and maintaining their presence and contacts in Russia. However, one interviewee also pointed out that by temporarily cutting down or even suspending their operations in Russia, Finnish companies risk losing their foothold in the Russian market for Chinese companies, for instance.

Although most of the companies viewed the current situation in Russia too risky and resource-consuming particularly for SMEs, some were still, for instance, searching for customers and attending trade fairs in Russia in order to be in a good position when the situation normalises. Moreover, although most of the interviewed companies have suspended their operations in Russia, there were also a few examples of companies that were still actively seeking for new business contacts there. These companies have received cooperation requests either from consultants or straight from Russian customers, and despite of the current situation, they see a lot of opportunities in Russia and have become interested in doing business there. These companies acknowledge that the economic situation in Russia is weak and building presence there is resource-consuming. Still, despite of the current difficulties, they think that gaining foothold in Russian market and being present there when the economy starts to recover will be worthwhile.

On the other hand, some companies were rather pessimistic about the future prospects in the Russian maritime and offshore industry – for instance, some large Arctic energy projects have been planned and discussed for long but they always seem to be postponed forward. In addition, a few interviewees did not expect the situation in Russia to improve without a comprehensive political change. Still, nearly all companies emphasised the importance of keeping an eye on the developments in Russia in case some opportunities will emerge after all.

Consequently, most of the interviewed companies did not view Russia as the main focus market at the moment, particularly because there is nothing going on now – investments are stalled, large energy and offshore projects are frozen and no potential projects or deals are in view. Companies also found the unstable economic and political situation challenging for business and prioritised less risky and resource-demanding projects and markets. However, neither had they completely abandoned Russian market but instead remained prepared to continue their business there in the future, as soon as the economic situation has improved and political and business relations normalised.

Figure 5 *SWOT-analysis of Finnish SMEs in the Russian maritime and offshore industry*

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • Advanced technological knowhow, for instance related to critical safety aspects • Arctic and offshore expertise • High quality products and services • Specialisation in their own niches • Finns have traditionally good connections to Russia and good reputation there 	<ul style="list-style-type: none"> • Companies are small on international scale • Limited resources • Lack of sales and marketing skills • Products and services are relatively expensive due to high cost levels
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Neighbouring country, easy to access • Vast market • Due to strict safety and quality standards of the industry, state-of-the-art expertise and quality matter more than price • Industry suffers from low production due to outdated equipment, creates need for modern and functional products • Demand for services related to the product's whole life cycle, e.g. repair and maintenance 	<ul style="list-style-type: none"> • Unstable political and economic situation creates risks for companies • Economic sanctions restrict the trade • The rouble's decline and the weak financial situation of Russian companies have stalled the investments and frozen the development of energy and offshore projects • The rouble's decline against the euro has made Finnish products and services too expensive • Finnish companies risk losing their foothold in the Russian market for Chinese companies, for instance • Political pressure to localize production • Strategic industries require local presence and establishing • Logistics chain can be time-consuming and costly • Defects in the legal system, lack of adherence to agreements and rules and corruption • Cultural and language differences

5 Conclusions

The Russian maritime and offshore industry has recently received increased political attention and funding. Russia's interests to gain a stronger role in the global shipbuilding sector, develop new hydrocarbon fields on the continental shelf and increase maritime traffic in the Arctic waters are strongly reflected in the country's maritime policies and development programmes aimed to boost the maritime industry. Furthermore, as sea transportation is very important for Russia both in economic and strategic terms, it aims to secure shipping routes and means by modernizing the Russian fleet and developing sea logistics. In addition, as Russia has engaged into rearmament, the demands of the Russian navy significantly direct the development of the Russian maritime industry.

However, the Russian maritime industry still suffers from the legacy of the Soviet era which facilitated the development of military industry and naval shipbuilding. Russian civil shipbuilding industry is currently not competitive in commercial sense in comparison to its western and Asian counterparts. The Russian shipyards are in a rapid need of modernisation and the shipbuilding industry suffers from low productivity and technological inferiority compared to other shipbuilding nations. In fact, the industry is rather dependent on foreign equipment and technologies and Russian shipowners have also preferred foreign-built vessels. Consequently, the Russian shipyards have inadequate and outdated capacity to respond to the growing vessel orders from both the Russian navy and the energy industry.

So far, the development of the civil shipbuilding industry has been a particular priority for Russia but the expansion of the industry has recently faced several obstacles. The government funding for the development of the domestic shipbuilding industry has been reduced to free capacity for the naval orders. The increasing military orders have left little room for civil projects in shipyards, forcing energy companies to develop their own shipbuilding facilities to satisfy their demand for vessels and offshore structures. Moreover, shipyards are suffering from lack of equipment due to the export ban of some western products and services, and Russia's import substitution programme has not been able to facilitate the production of all substitutive components fast enough. On the other hand, the country's strategic choice to favour domestic production has been backed up by the Russian decision-makers and state-owned companies alike – now the biggest question seems to be how to develop the industry which is currently not competitive and can function only in a protected environment.

The current state of the Russian maritime and offshore industry reflects the country's industrial development. The role of Russia/the Soviet Union in the world economy has traditionally been first and foremost to supply raw materials to other countries, and still today the Russian economy is dependent on energy export revenues and affected by fluctuations in world market prices of energy. Although also the Soviet Union was able to develop high quality science, the science was harnessed to facilitate the economic development of the Soviet state and did not result in commercial innovations. The production of high value-added goods and services is still at a rather low level in Russia, and this applies to the maritime and offshore industry as well. Russia has aimed to close the technological gap with other shipbuilding nations by establishing joint ventures with them, and the international cooperation in the maritime and offshore industry is expected to lead to technology transfer and improved quality of Russian products and services.

Finland and Russia have a long history in cooperating in the maritime industry. Finland's war reparations to the Soviet Union, which were mainly delivered as ships, put a great strain on the Finnish society but simultaneously provided steady orders for the shipbuilding industry. The war reparations, and the following bilateral trade, allowed the Finnish shipbuilding industry to expand and develop its know-how. However, following the collapse of the Soviet Union in the end of 1991 and the simultaneous hard recession in Finland, the Finnish maritime industry experienced a crisis and had to go through a restructuring. The industry was able to recover from the crisis and develop its competence, and nowadays Finnish maritime companies benefit from their technological knowhow and specialisation. Particularly the Finnish expertise in Arctic and offshore technologies is of a great interest to Russians.

The interviewed companies, as well, considered Russia's large maritime and offshore industry to provide a lot of opportunities for Finnish companies. The interviewees saw the strength of the Finnish companies in specialisation and developing their expertise in some narrow field to be the best in the world. As Finnish enterprises cannot engage in price competition with companies from countries with lower level of costs, their asset lies in high quality products and services, and thus in providing Russian companies with technologies and knowhow which the Russians do not possess. For instance, the demanding industries with strict safety and quality standards, such as the offshore and maritime industry, were seen as particularly lucrative for Finnish businesses with state-of-the-art expertise in these fields. In addition, the modernisation projects in the Russian maritime industry were seen to provide opportunities for the Finns – for instance, there is great demand for modern, functional products, such as tools, that can improve productivity of the Russian shipyards.

However, the current unstable political and economic situation, particularly the rouble's decline against the euro, the plunge in world oil prices and the economic sanctions imposed on Russia, have complicated the Finnish companies' possibilities of doing business in Russia and made the Russian market less appealing for them. Because the investments and large energy and offshore projects have stalled in Russia, there is not much going on right now from the companies' point of view. This was reflected also in the reactions of the interviewed SMEs to the Russian market situation – some of the companies had thrown in the towel and turned to other markets because the trade in Russia has stopped, or their efforts to get trade have not paid off. However, some SMEs still continue business as usual, try to adapt to the new situation or at least maintain the existing contacts because they see the market potential and want to keep their foothold in Russia. Moreover, a few are even actively searching for customers and attending trade fairs in Russia in order to be in a good position when the situation normalises again. In fact, the company's specific field of operation, as well as the director's attitude and expectations of the future prospects for the Russian market play an important role in how to view the new market situation.

The interviews reflect a rather practical attitude – Russia is not the main focus market for the companies at the moment because no potential projects or deals are in view. However, although the interviewed companies emphasised their wish to focus on business only, not politics, Russia's unstable economic and political situation was found challenging and less risky and resource-demanding projects and markets were often prioritised. However, the economic situation was expected to improve and political and business relations normalise at some point and, recognising the vast business opportunities in the Russian maritime and offshore sector, the companies wanted to maintain their foothold in Russia and remained prepared to continue their business there in the future.

Furthermore, the companies emphasised that internationalisation is always challenging – this applies not only to Russia but every market. Consequently, whether to choose to turn to other markets, maintain existing contacts or even actively develop operations in Russia, all companies should develop their activities in a strategically far-looking and patient manner as internationalisation in the end depends on the company itself. Regardless of the field of business or the geographical location of the market, it will always take a long time and a lot of resources to form business contacts and build trust, and immediate success cannot be expected.

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Appendices

Appendix 1 The objective and implementation of the study

The objective of the study

The main objective of the study is to analyse the development of the Russian maritime and offshore industry, as well as the opportunities it offers for foreign – particularly Finnish – companies. The research is further divided into two parts:

1) The history and the current state of the Russian maritime industry

The first part (Chapters 2 and 3 of this report) focuses on studying the current state and the historical background of the Russian maritime industry with the aim to recognise and understand the main factors which have impacted and are impacting the industry's current state. The early development of the Russian maritime industry and the Finnish-Russian shipbuilding cooperation during the Soviet era are studied in order to understand the foundations of the Russian maritime industry and the Finnish-Russian maritime cooperation. The main guiding interests behind the Russian maritime politics and their impact on the maritime industry, as well as the main actors affecting the Russian maritime industry's development are also analysed. Furthermore, the first part analyses the competitiveness of the industry as well as the business opportunities it offers for foreign companies in general, taking into account the recent political and economic developments.

2) The perceptions of Finnish SMEs on the Russian maritime and offshore industry

The second part (Chapter 4) focuses on the perceptions of Finnish SMEs on the current situation and the future of the Russian maritime and offshore industry. The analysis is based on interviews with 20 Finnish SMEs that have or have had activities in the Russian maritime and offshore industry. The aim of the analysis is to gain a closer understanding of the views and experiences of Finnish SMEs on operating in the Russian maritime and offshore industry, particular focus being on the challenges and opportunities the companies see in the industry, as well as on their perceptions on the industry's future prospects. Furthermore, the companies' views on cooperation and networking as furthering their success in Russia are studied.

The implementation of the study

The research work for this study was carried out between January 2014 and September 2015. The first part of the research, *the history and the current state of the Russian maritime industry*, was implemented as a desk study, based on various written sources, such as earlier studies and reports, company reports, policy documents and media sources, as well as expert interviews.

The research started in January 2014 with the collection of the research material, and the analysis of the material and the writing of the report continued throughout the year 2014. Furthermore, due to the changing international political and economic situation, i.e. the Ukrainian crisis and the following sanctions on Russia, the research work continued until September 2015, approximately a year after the implementation of the first sanctions on Russia, which allowed for the analysis of the impacts of the current political and economic situation on the Russian shipbuilding and offshore industry and the operations of foreign companies in the industry.

The second part, *the perceptions of Finnish SMEs on the Russian maritime and offshore industry*, complements the first part with analysis based on in-depth interviews of 20 Finnish SMEs which have either been operating, are currently operating or are trying to enter the Russian maritime and offshore industry. The research for the second part was conducted between January–August 2015, starting with the planning of the interview themes and contacting the potential interviewees in January–February 2015.

The interviewed SMEs were selected based on a list which was received from the Finnish export promotion organisation Finpro, including companies that were either currently operating in the Russian maritime and offshore industry or were interested in the Russian market, as well as through snowball sampling. The interview requests were firstly sent to the CEOs of the companies who were the primary interviewees – however, in some cases, the CEO delegated the interview request to other management-level person in the company who was then interviewed.

The interviews were conducted as semi-structured and either face-to-face or by phone in February–April 2015, and the transliteration of the interviews took place simultaneously during those months. The analysis of the interview data and the writing of the report were then conducted in May–August 2015. A detailed description of the interviewed companies is presented in the following table:

Company	Year of foundation	Industry	Number of employees	Turnover (EUR million)	Interviewee's status in the company	Date of the interview
A	1980-2000	maritime, offshore	< 50	< 10	CEO	17.3.2015
B	before 1980	maritime	50-100	< 10	CEO	24.3.2015
C	1980-2000	maritime	< 50	< 10	CEO	17.3.2015
D	1980-2000	offshore	< 50	< 10	CEO	30.3.2015
E	1980-2000	offshore	> 100	10-20	Sales Director	2.3.2015
F	1980-2000	maritime	50-100	10-20	Vice President	30.3.2015
G	after 2000	offshore	50-100	< 10	CEO	17.2.2015
H	before 1980	maritime	> 100	> 20	CEO	31.3.2015
I	1980-2000	maritime, offshore	< 50	10-20	CEO	2.3.2015
J	before 1980	maritime	> 100	> 20	Sales Director	17.4.2015
K	before 1980	maritime	50-100	10-20	CEO	30.3.2015
L	1980-2000	maritime	50-100	10-20	CEO	12.2.2015
M	1980-2000	maritime, offshore	< 50	< 10	CEO	18.3.2015
N	1980-2000	offshore	< 50	< 10	CEO	9.4.2015
O	after 2000	maritime, offshore	50-100	10-20	Sales Manager	26.3.2015
P	before 1980	maritime, offshore	50-100	< 10	Vice President	23.3.2015
Q	before 1980	maritime, offshore	> 100	10-20	CEO	2.4.2015
R	1980-2000	offshore	50-100	< 10	CEO	2.4.2015
S	1980-2000	offshore	> 100	> 20	CEO	20.2.2015
T	after 2000	offshore	50-100	< 10	CEO	22.4.2015

Appendix 2 Summary of the previous studies and reports on the Russian maritime industry since 1990

Author	Published	Title	Purpose of the study/report
J. N. Gorbachev (Ed.)	1990	Sotrudnichestvo SSSR i Finliandii v oblasti sudostroeniia (published only in Russian)	To provide information on the Finnish-Soviet shipbuilding cooperation, in particular the vessels that Finland delivered to the Soviet Union and the development of the Finnish shipbuilding industry.
J. Bitzer and C. von Hirschhausen	1997	The Shipbuilding Industry in East and West: Industry Dynamics, Science and Technology Policies and Emerging Patterns of Cooperation	To analyse the international shipbuilding market in comparison to the Eastern European shipbuilding industry in the 1990s, focusing in particular to the restructuring processes of the Eastern European shipyards.
M. L. Hauner	2004	Stalin's big-fleet program	To study the role of Stalin's big-fleet programme in the development of the Soviet navy and shipbuilding industry.
Finpro	2011	North-West Russia Sea Cluster Business Map	To study the development trends, government policies and main actors in the Russian shipbuilding and offshore industry, as well as the role of the Finnish companies in the sector.
E. Laaksonen and H. Mäkinen	2013	The potential for expanding inter-cluster cooperation between the shipbuilding industries of Estonia, Finland, and North-West Russia	To analyse the preconditions for cluster internationalisation between shipbuilding clusters of Estonia, Finland, and North-West Russia.
E. Laaksonen and H. Mäkinen	2013	Russia – the awakening giant (in SmartComp Research Report No 3, Maritime sector developments in the global markets)	To analyse the development, actors and networks, competitiveness and the future of the Russian maritime industry.

Y. Dekhtyaruk, I. Karyshev, M. Korableva, N. Velikanova, A. Edelkina, O. Karasev, M. Klubova, A. Bogomolova and N. Dyshkant	2014	Foresight in Civil Shipbuilding – 2030	To analyse the current situation in the Russian shipbuilding industry and identify challenges and opportunities, as well as develop future scenarios for the industry.
H. Mäkinen, E. Laaksonen and K. Liuhto	2014	Energy and Maritime Clusters in the Eastern Baltic Sea Region: Competitiveness through International Inter-Cluster Cooperation.	To analyse the preconditions for increasing cross-border inter-cluster cooperation in the maritime and energy sectors in the Eastern Baltic Sea region (i.e. Estonia, Finland, Latvia, Lithuania, and North-West Russia).
U. Lainio, A. Vetrova and A. Zak	2015	Shipbuilding in Russia & Azerbaijan	To map the shipyards and other maritime companies in Russia and Azerbaijan that have a demand for Finnish products or services and provide information about business opportunities they could offer for Finnish companies.
U. Lainio and A. Zak	2015	Shipbuilding Business Opportunities in Russia & Azerbaijan	To map the shipyards and other maritime companies in Russia and Azerbaijan that have a demand for Finnish products or services and provide information about business opportunities they could offer for Finnish companies.

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