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Challenges for the Norwegian Maritime Sector in the Ukraine

Collaboration between the Norwegian and the Ukrainian enterprises in shipbuilding can benefit both parts. Low cost of labor and materials, combined with high quality of production, make the Ukrainian shipyards attractive for customers. The paper presents the analysis of the Ukrainian shipbuilding industry. The case study investigates experience of cooperation between the Ukrainian shipyard and the Norwegian company.

Співробітництво норвезьких та українських підприємств у галузі суднобудування може принести вигоду обом сторонам. Дешеві витрати на оплату праці та матеріали та висока якість продукції роблять українські суднобудівні заводи привабливима для замовників. У даному досліджені запропоновано аналіз суднобудівної галузі України. На прикладі досліджується досвід співробітництва між українським суднобудівним заводом та норвезької компанії.

1. Introduction

Today there is a growing interest from Norwegian businessmen in Ukrainian enterprises. Currently the volume of trade between Norway and Ukraine is not very high: in 2004 it equaled about USD 180 million. Norway has mainly exported fish and seafood for USD 125 million, while importing steel, iron, chemicals, and grain from the Ukraine for USD 55 million [4].

There are relatively few Norwegian enterprises that have established themselves in the Ukraine. The most successful is the Norwegian telephone company Telenor, which owns a 56.5-percent share of one of the biggest Ukrainian mobile phone companies, Kyivstar.

The Norwegian maritime industry is a significant sector of the national economy where the country tries to keep a leading position. Norwegian shipping companies, shipyards, and other members of the maritime branch are highly internationalized. They have business contacts and operate worldwide. The Ukraine, with its potentially strong shipbuilding industry, skilled labor force, and reasonable wages, could benefit much more than it presently does from cooperation with Norwegian firms.

The Norwegian maritime cluster consists of a number of industries, among them shipping companies, shipping finance, maritime education, ship insurance, classification services, shipbrokers, and others (see [3] for details). This study does not allow considering challenges in all maritime businesses. In my opinion, cooperation in the sphere of shipbuilding is of current importance. The world shipping market is booming now. Many shipyards around the world have received orders for several years in advance. Prices for newbuilds are presently sky-high. The capacity of Ukrainian shipyards is not fully used.

The purpose of this paper is to analyze the Ukrainian shipbuilding market, to explore opportunities and threats to Norwegian maritime industries in the Ukrainian market, and to evaluate the present experience from collaboration between enterprises of both countries in the sphere of shipbuilding. I also hope that information presented in this article will be useful for interested businessmen from both countries. This study was carried out as a project in the area of maritime research at Stord/ Haugesund University College.

The rest of this article is structured as follows. The next section will provide a brief macroeconomic

overview of the Ukrainian economy. Then I provide background on the research methods used in this study. After that I present results of the shipbuilding industry's analysis and case study. The article finishes with discussion and conclusions.

2. Macroeconomic Issues

Political stability and the general economic situation in a country substantially influence business decisions, especially those of a long-term nature. That is why it seems appropriate to briefly characterize the current state of affairs in the Ukraine in this paper, and to explore problems that have a direct impact on shipbuilding.

In general, during the last years, the Ukrainian economy has functioned increasingly better. Key economic indicators are given in Table 1. As we can see, the Ukraine's gross domestic product (GDP) growth rate is rather high and the country had a positive current account balance of 11 percent in 2004.

Though macroeconomic indicators of the Ukraine's recent development are better than those of its neighbors, Bulgaria and Romania, foreign investors consider investments into the latter economies more secure. The only reason for this is the candidate status of Bulgaria and Romania for membership in the EU.

Table 1

Key economic indicators of the Ukraine, 2000-2004

	2000	2001	2002	2003	2004
GDP growth	5.9	9.2	5.2	9.6	12.1
Inflation (end of period)	25.8	6.1	-0.6	8.2	12.3
Current account balance (percent of GDP)	4.7	3.7	7.5	5.8	11.0
Budget balance (percent of GDP)	-1.3	-1.6	0.5	-0.9	-4.5
Exchange rate per U.S. $	5.44	5.37	5.35	5.33	5.31

Source: [1, p.4; 10]

Financial markets directly influence maritime industries [3]. The currency rate has been rather stable during the last six years. The Ukrainian currency, hryvna, is de facto pegged to the U.S. dollar and remains undervalued. However, the stimulating effect of a favorable exchange rate policy is outweighed by high interest rates. Shipyards must pay banks around 15 percent per annum to get financing for newbuilds. Generally, the banking sector of the Ukraine is rather weak. Presently, banks are mainly domestically owned with an insignificant market share of foreign banks (11 percent of bank capital). As of June 2005, of the 162 Ukrainian banks, only 22 are foreign owned [11]. In comparison to western banks, Ukrainian banks are very small. The process of consolidation is in the very beginning stages, but the sector is definitely on the verge of a transformation. In 2005, Austrian Raiffeisen Bank purchased the Aval Bank, the second largest bank in the Ukraine. It is significant that the Aval Bank is a major creditor for shipbuilding in the Ukraine. Two other Ukrainian banks were bought by Italian Banka Intesa and BNP Paribas of France.

3. Materials and Methods

Using Porter's Diamond Model [5] I had analyzed shipbuilding industry of Ukraine. According to Porter, main elements of this model are: (1) factor conditions, (2) demand conditions, (3) firm strategy, structure and rivalry, (4) related and supporting industries together with (5) government, and (6) chance.

I have used an exploratory case study to investigate opportunities and threats that can face Norwegian firms working in the Ukrainian shipbuilding market. There are two parts of the analysis. On the one hand, there is the Ukrainian 61 Communards Shipyard; on the other, the Norwegian company DOF Industri.

4. Overview of the Shipbuilding Industry in the Ukraine

The production volume of the Ukraine's shipyards equaled USD 88.5 million in 2004 [2]. Generally, the combined production facilities of all the Ukrainian shipyards are only partially utilized and employ significantly fewer people than they did in the Soviet era. In the same time, Polish yards produce more than they did during their best times before the political and economic transformation. In terms of deadweight, the production from the Polish yards has risen from 408,900 DWT in 1985 to 781,700 DWT in 1999 [9]. Why do Ukrainian shipyards do much worse than their counterparts in neighboring states Poland, Romania, Russia, Bulgaria, and Croatia?

So far, only seven hulls have been built for Norway in the Ukraine, at the 61 Communards Shipyard: five for DOF Industri (now Bergen Yards), a member of the Møgster Group, and two ice-breaker hulls for the Havyard Leirvik AS, outfitting shipyard. Currently, a reefer hull is under the construction for Kleven Maritime at the Kherson Shipyard, with an option on several other hulls.

4.1. Factor Conditions

In this chapter I will consider factors' influence (such as labor, natural resources, land, capital, and infrastructure) on the Ukrainian shipbuilding industry. Ukraine is situated rather favorably for the shipbuilding purposes. The country has long coast line. It is washed by the Black Sea and the Sea of Azov. In addition, there are several big rivers (the Dnepr River, the Danube, and the South Bug) suitable for navigation and shipbuilding. The biggest shipbuilding and maintenance yards in the Ukraine are situated in the south along the coast of the Black Sea and on rivers that flows into the Black Sea (the Chernomorsky Shipyard, the 61 Communards Shipyard, the Damen Okean Shipyard, the Kherson Shipyard, Pallada, the Zaliv Shipyard, the Sebastopol Marine Plant, the Kiliya Shipbuilding and Ship Repair Yard, and etc.). Other yards are situated on the Sea of Azov (the Mariupol Ship Repair Yard) and in Kyiv (the Leninskaya Kuznya Shipyard, the Kyiv Shipbuilding and Ship Repair Yard).

Generally, the Ukraine has highly-qualified labor power. There is an educational system that provides training of various specialists specially for shipbuilding industry. It includes vocational schools, colleges and the National University of Shipbuilding. The National University of Shipbuilding educates engineers, economists, lawyers, IT-specialists for shipyards and ship design offices. Many workers and engineers have acquired experience of work in foreign shipyards that also has a positive effect.

As I have described in the previous chapter, domestic capital is not yet so powerful. But there are first signs of capital's 'injection' into Ukrainian shipbuilding. In the end of 2005, Ukrainian industrial group Finance and Credit has bought 76 percent of shares for the Zaliv Shipyard in Kerch. The new owner controls a number of machine-building plants and the Kyiv Shipbuilding and Ship Repair Yard. Finance and Credit has ambitious plans in shipbuilding. In particular they want to receive big contract from the Norwegian Aker Yards [7]. Similar Russian industrial group OMZ, having shipyards, design office and large heavy industry enterprises, functions rather successfully.

Geographically, Polish shipyards are located much closer to Norway than Ukrainian yards. Timing in shipping is an important factor. From this point of view Polish shipyards have advantage, because it is faster and cheaper to tow a hull or vessel from Poland than from the Ukraine. However, the Ukraine's shipyards can benefit from lower prices.

Ukraine has good infrastructure of railroads, highways, and airports. All large shipyards have railroad access and loading equipment. Railroad transport is cheap and very well developed in Ukraine.

Ukraine has deposits of iron ore and large steel mills. That is a positive factor for shipbuilding, as steel is a main component for the industry.

4.2. Demand Conditions and Chance

Michel Porter stresses on significance of domestic demand for industries. Domestic demand for production of the Ukrainian shipyards is low. Although in the past industry served mainly for domestic customers, the national demand presently has sharply dropped. Navy ships, one of the main specializations of the Ukrainian shipyards, are not necessary for the Ukrainian Navy at the moment. The State Black Sea Shipping Company, a big enterprise earlier, has only two vessels now. The Ukrainian companies order mainly small vessels (e.g. barges and harbor tug boats).

The Ukrainian shipbuilding industry is definitely export oriented. The demand for new ships over the world is high presently. So there is a very good chance now for the Ukrainian shipyard to work up new markets, approve their production process, use free capacity, improve managerial processes, and restructure shipyards.

Related and Supporting Industries

Industries related to shipbuilding and supporting shipyards traditionally are very well developed in Ukraine.

There are a number of ship design firms and various research institutions in Ukraine. They provide shipyards with production drawings and design vessels for customers. The ship designers are highly qualified and have vast experience of work with foreign firms. The biggest actors are Chernomorsudoproekt, Torola Ltd, SRI Center, Zorya-Mashproekt, and others. The majority of large shipyards have own design departments that support yards production.

There are factories supplying shipyards with equipment, fittings, pipes, anchors, etc. in Ukraine. Production of Russian-based plants is also used by Ukrainian shipyards. Moreover, representatives of world leading manufacturers of ship engines, equipment, paint, and so on, also have their offices in Ukraine.

Det Norske Veritas has its site office in Ukraine, in the city of Nikolaev. Other large classification societies also have their representatives which inspect ship construction and repair, certify workers, etc.

Vocational schools for shipbuilding are educating fewer production workers following decreased demand for them. However, institutions of higher education provide enough engineers and other specialists for shipbuilding.

4.4. Government

There are a number of external and internal reasons for the unsatisfactory situation in shipbuilding industry. Among the external reasons I could mention is, above all, the extremely slow privatization of shipyards. Some shipyards are still under state ownership, while others have only received approval for privatization within the last few years. The state does not provide proper control of the yards that were privatized. For example,

Chernomorsky Shipyard, one of the biggest in Europe, was bought by Russian businessmen in 2003. Since then, the building of ships has stopped at this company. A number of shipowners (including Norwegians) have tried to place orders there, but this was impossible.

The privatization and division of the Ukrainian shipyards is not yet finished. A number of legal actions are in court now. One of them is between the Fund of State Property and the new owners of the Chernomorsky Shipyard. The Fund of State Property is trying to get back the Shipyard because the new owners did not fulfill their obligations and have essentially stopped ship construction. Another case is the struggle for the Kherson Shipyard. The Evroresource Company bought a controlling package of shares for this yard from the state in 2004. The Kyiv-based Leninskaya Kuznitsa Shipyard, which owns debts from the Kherson Shipyard worth USD 8 million, is trying to gain the ownership of the latter [6].

4.5. Strategy, Structure and Rivalry

Though the Ukrainian shipyards compete with each other for orders, rivalry is not so strong. It seems that there are more customers willing to order vessels than shipyards are able presently to build. The shipyards compete with each other and foreign firms for qualified production workers.

Initially, all Ukrainian shipyards used common principles of organization because all of them functioned under the conditions of planned economy. In the transformation period the shipyards management had chosen own ways of restructuring. According to experts, one of the best organizational structures is at Damen Okean Shipyard. The reorganization was carried out with the help of Dutch owners. Kherson Shipyard had also efficient organizational pattern in the transformation period. They have organized separate production units on the basis of former workshops. They were members of the shipyard, but had also own business activity and worked both for the Kherson Shipyard and as subcontractors.

Case Study

The biggest Norwegian order placed in Ukrainian shipyards was the construction of five hulls at 61 Communards Shipyard for DOF Industri (now Bergen Yards). I would like to explore possible threats to and possibilities for Norwegian shipowners and shipyards in the Ukraine based on an example of collaboration between enterprises in the Ukraine and Norway in the area of shipbuilding.

The 61 Communards Shipyard is situated in the city of Nikolaev, the center of the Ukraine's shipbuilding industry. The shipyard is state-owned, in part because it builds ships for the Ukrainian Navy. This is the oldest shipyard in the Ukraine. To date, the yard has had the majority of the country's shipyard projects for Norwegian customers. Between 2001-2006, three hulls for platform supply vessels, two hulls for artic stern trawlers, and two ice-breaker supply vessel hulls were constructed there. The hulls were towed to Norway and outfitted there at Fitjar Mekaniske Verksted AS, at Kimek AS (both are members of the Møgster Group), and at Slipen Mekaniske AS. The ice-breakers were finished by Havyard Leirvik AS.

Technical characteristics for the shipyard include two slipways that allow the construction of ships up to 250 m in length, and 28 m in breadth, and one slipway for building vessels up to 256 m and 37 m, respectively. The shipyard's equipment is only somewhat new, and in part needs modernization. The yard employs around 6,000 workers. 3-4,000 employees are occupied by shipbuilding, though the construction of hulls only employs s up to 1,000 of them [8].

At the time of the first contract with DOF Industri, the shipyard's financial situation was disastrous. It was on the verge of bankruptcy. Shipbuilding had stopped. The shipyard was engaged in some ship repair and the production of small parts for vessels. Some effort was necessary to re-start hull production.

The financial problem was also rather serious. The terms of the contract stipulated that the yard would receive payment from the DOF Industri the day the hull was launched. The 61 Communards Shipyard did not have enough turnover themselves to finance the building of the hull. The shipyard was in debt to the Ukrainian Prominvestbank. Not many banks were willing to take the risk to lend money to the yard. Finally, the shipyard received credit at the high interest rate of 15 percent per annum.

The next problem was an uneven distribution of personnel. The shipyard had employed too many administrative personnel, and had a lack of production workers. Many of the highly-qualified production workers and engineers had acquired work abroad, at shipyards in Poland, Latvia, Lithuania, Russia, Croatia, and in other countries where the demand for them was and still remains high. Furthermore, some employees were on paid leave. The problem with the personnel was solved by attracting subcontractors from other Ukrainian shipyards and from abroad. The salary of production personnel was raised. This caused complaints from other employees that were not engaged in the manufacture of the hulls.

During the early stages of the first hull construction, there were problems with the quality of paint work. The shipyard's own paint shop could not provide technologic quality in accordance with the specification requirements and Det Norske Veritas (DNV) standards. As a result, a Norwegian-Ukrainian joint venture company was created to carry out the paint work. Modern painting and metallization equipment was imported from Norway, together with up to date technology. Subcontractors were invited, too. The joint venture had Norwegian and Ukrainian management and employed qualified Ukrainian painters.

The biggest problem for the 61 Communards Shipyard and the DOF project was the delay in hull delivery. This was real a disaster for both parties. The shipyard paid significant penalties for each day of delay. DOF Industri also had financial losses because of the late delivery the whole ship. This was named as the main problem by executives from both sides and by independent experts.

Discussion and Conclusions

Late and unfair privatization of Ukrainian shipyards is one of the main reasons for the present crisis in the industry, as well as an outsider position for the country's shipyards on the world shipbuilding market. In 1998-2003, there were good opportunities to buy large, modern shipyards in the Ukraine at a low price. For example, the Damen Group of Holland bought 78 percent of the shares of the Okean Shipyard in Nikolaev for approx. USD 5.2 million in 2000.

The majority of the Ukraine's shipyards are still in a state of transformation. The old organizations that functioned more or less effectively during the Soviet era have been destroyed. Of course, they would not be viable in a new economic system, but new organizations corresponding to new conditions have not been created either. The management at the shipyards should concentrate on changes in organizational structure. Here, Norwegian experience can be taken into account.

From the case of the 61 Communards Shipyard, I can name the major threats for customers ordering ships in the Ukraine: (1) delays in delivery, (2) lack of a reliable system of guarantees for deliveries of the ship's equipment, and (3) financial problems for the Ukrainian yards. There was even a case where a signed contract had to be canceled because the yard could not get a loan.

To some extent delays in hull delivery were caused by constant design alterations (partly because of changes in owners' preferences). But the major reasons were inadequate organization, a lack of efficient planning, and a shortage of qualified project managers responsible for construction of the separate hulls. The schedule of construction was constantly violated due to different problems occurring under way: delays in the purchase and delivery of materials, poor logistics planning, the low productivity of workers, etc. The organizational structure was rigid and highly bureaucratic. Often even an insignificant decision required approval at several levels. Some modifications were made during the period of construction. But the shipyard's management felt resistance from the personnel towards the changes. Project managers, who were responsible for the construction of the whole hull, did not have real power to influence the shipyard's divisions. Moreover, they lacked real experience and knowledge to do this job.

In spite of the fact that the 61 Communards Shipyard had some problems, the quality of the produced hulls for DOF Industri AS was very good. Low cost of hulls stipulated by cheap labor and inexpensive materials combined with high quality of production represents the major opportunities to Norwegian firms.

The activity in the Norwegian-Ukrainian joint venture for painting was successful. This is evidence that it is possible to organize an effective business entity embracing the whole cycle of hull production, from the early stages to the completed vessel. Norwegian outfitting shipyards accumulated great experience in functioning as small (from a Ukrainian point of view) yet highly effective yards. They widely use subcontractors to fulfill separate tasks, and do not have as many permanent workers.

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