# The change of trade pattern for cod and other species of white fish In the Murmansk Region


Photo: Ekaterina Goncharova

**By**

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## Dedication

I dedicate this work to my mother who has been supporting me and encouraging me to keep going all way long.

## Preface

After dissolution of the Soviet Union, the economical and political changes in Russia resulted into development of the new institutional arrangements and altered the behaviour of all industrial organisations. The new institutional regime and the introduction of the new market-based economic system forced fishing companies to change their business behaviour and find new ways to adjust to the existing situation.

The main objective of the Thesis is to show how the higher-order institutions have influenced fishing companies and changed the trade pattern for cod and other species of white fish in the Murmansk Region.

In order to illustrate this, one fishing company would be selected as a case-study and the main factors which have led to the significant change of trade pattern for cod and other species of white fish would be generalized and analyzed together with the data applied on an entire Russian North-West Fishery.

**Keywords**: Russian North-West fishery, institutions, institutional framework, trade pattern for cod, fishing companies.

## Acknowledgements

It is not easy to write acknowledgements. When I look back I see a lot of wonderful people who have been there for me during this long journey. And even thought I have no ability to mention all of you within such a limited space, I want you to know, I remember you all and sincerely grateful for the help, support and time you gave me.

First of all I would like to thank my supervisor Frode Nilssen who guided me trough this process and encouraged me to work hard. This work would not be possible without his wise advises and valuable recommendations. I also want to make a few special thanks to Gøril Voldnes and Bjørn Inge Bendiksen from Norwegian Institute for Fisheries and Aquaculture Research (Fiskeriforskning) for spending their time answering my questions and for their research assistance.

My deepest gratitude and special thanks to my dad, Sergey Kisselev, who introduced me to the Russian northwest fishery. His support and excellent knowledge of industry helped me to get access to many scarce sources of information I would never be able to get all by myself.

I also would like to thank all my informants, for their patience and generous assistance with data collection.

I send my thanks to the Norwegian College of Fisheries Science and my colleagues from International Fisheries Programme. I feel honored for an opportunity to study there with all of you.

Anna Kisseleva
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## Abbreviations and acronyms

| | |
|---|---|
| BBC | Bare-boat Charter |
| CPSU | Communist Party of the Soviet Union |
| DES | Delivered Ex Ship |
| FOB | Free on board |
| JSK | Join-Stock Company |
| MFC | Murmansk Fishing Company |
| NPS | Production Scientific Council |
| PINRO | Polar Scientific Research Institute |
| Sevryba | North Fish (North-West administrative fishing Association) |
| Sevrybsnab | North Fish Supply (administrative apparatus for Material and technical supply during Soviet Union) |
| TAC | Total Allowable Catch |
| ZAO | Closed (joint-stock) company |

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# Chapter 1: Introduction

The main objective of this chapter is to provide a brief presentation of Russian North-West fishing industry and show how the transition from planned towards market-based economy affected regional fishery and changed behaviour and strategy of fishing organisations.

## 1.1 Historical background

The Fishing industry plays an important role in the economy of North-West Russia which is represented by the three regions: Murmansk region, Archangelsk region and The Republic of Karelia (See figure 1).

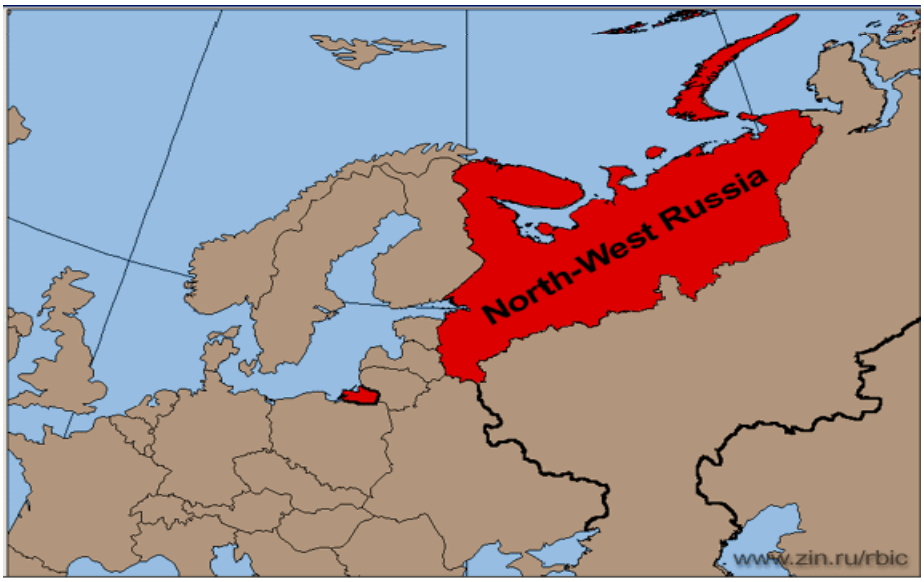


Figure1. The North-West Russia

### 1.1.1 Murmansk Region and Fish Industry

Murmansk region (See figure 2) appears a primary economic sector, which makes it one of the main sources of working places for people (Komlichenko 2002: 35).

The region supplies 16% of Russia's fish production where the major part is cod. It also plays a significant role in the provision system of ration security of the Russian Federation and takes the third place among the regions of Russia and the first place in the European part in fish catch.

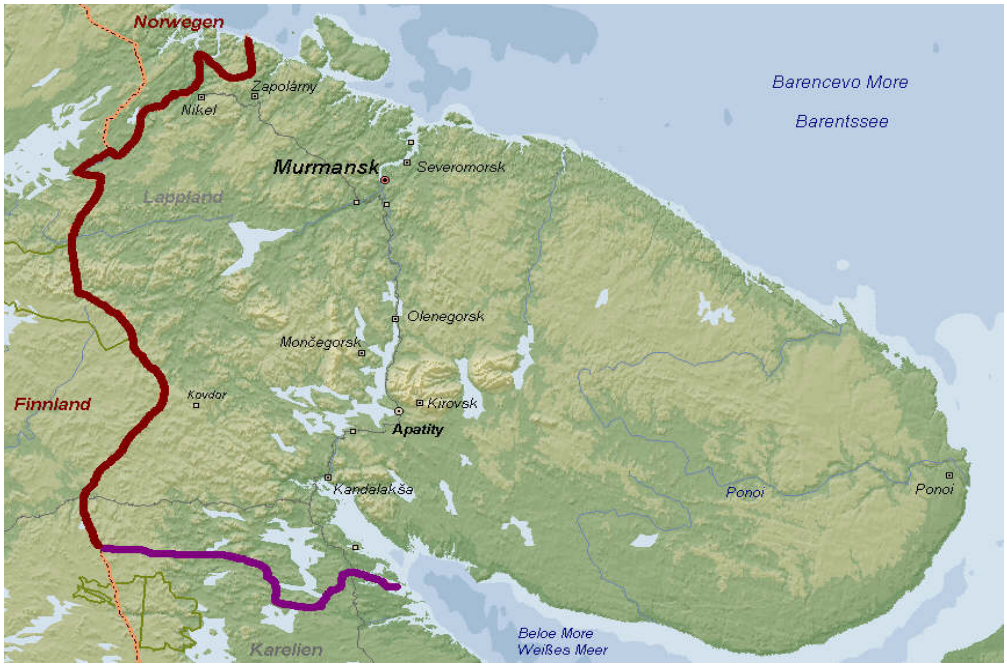


Figure2. Murmansk Region

Traditionally, the biggest part of the catch belongs to the Gadidae family (Cod), which in different years reach 75% of total catch.

Nowadays, trade for white fish and particularly for cod is the one of the main activities and the primary profit sources both for enterprises and for the region (Fish Business 1/1998: 12, 13). According to official statistics fishing industry is the third most export oriented after gas and oil in Russian Federation (Gavrilov 2001: 8) and second after metals in North-west Russia (See figure 3).

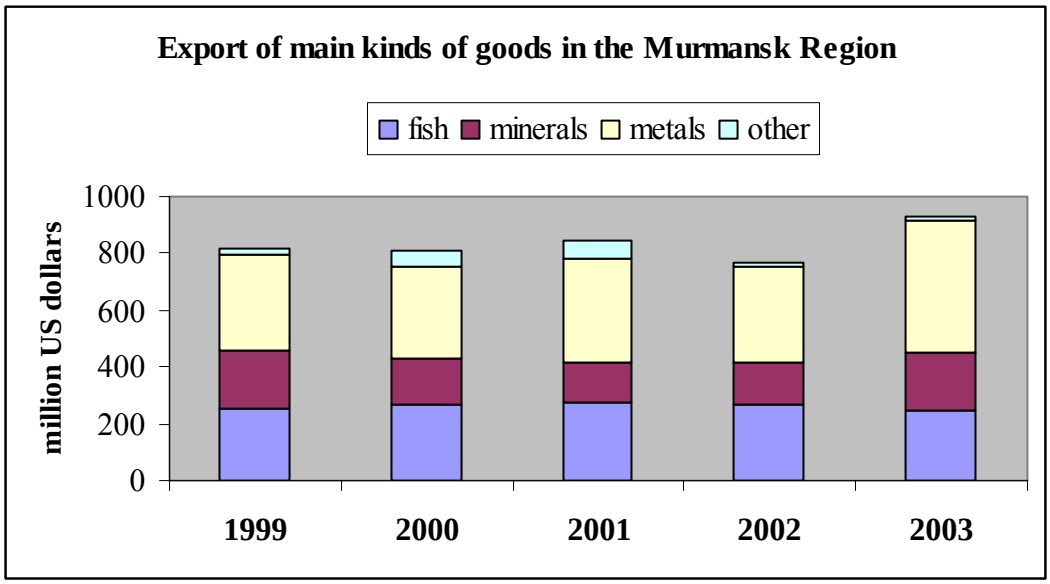


Figure 3. Export of main kinds of goods in the Murmansk Region[1].

Currently there are 210 fishing and fish processing companies, where 102 of them are engaged in marine fishing, 65- in coastal fishing, 26-are both fishing and fish processing oriented, and the rest 43- are just fish processing companies.

The leading organizations of the region are "Union of fishery organizations", consortium "Murmansk trawl fleet", non-commerce organization "Union fish industrialists of the North", non-commerce union "Association of coastal fish industrialists and farms of "Murman" (Evdokimov 2002: 5, 6). The main regional scientific organizations and professional educational institutions of Russian North-West are also concentrated in Murmansk.

[1] Source: Own compilation based on the data provided by Murmansk Region Committee of the State Statistic. See External Economic Activity of organizations of Murmansk Region in 2003.

The number of vessels registered at the Murmansk fishing port amount to 246 vessels with 34 large, 189 middle-sized and 23 small vessels (Murmansk Fish Resources: 38/2004: 10).
The history of the Murmansk Region Fishery started in 1920-years with transference of some Archangelsk steam-trawls to the Murmansk port and the begging of all-the-year-round cod catch in the Barents Sea.

### 1.1.2 Soviet Fishery System and "Sevryba"

During XX century Russian North-West fishery went through a tremendous change. In the Soviet times during planned economy Fishery represented a prominent and high-industrialized industry: big fishing and transportation fleets, land-based processing capacities, shipyards.
Before Second-Word War, in the end of the 1930s some fish food production from Murmansk was exported to a wide range of European countries such as Italy, Greece, England, Germany, Holland, Eastern countries and dried cod had been delivered even to Egypt (Tishkov 2002: 10).

However, after the Second World War, when the country was in a big need for food, the export of fish and fish products wasn't an objective anymore and focus was switched towards domestic market in order to secure population of the Soviet Union with fish products and seafood. In 1951 the actual per capita consumption of fish goods was set equal to 23, 7 kg (Chichelnitsky 2003: 9).

In order to achieve this objective, the leadership of the Union developed 5 large regionally based administrative fishing associations, which were assigned to exploit specific parts of the ocean on a global basis and from the 1950s Russian fleet started to operate in the distant areas of World Ocean (Zilanov 2004: 2).

North-West region of Russia was attached to the northern basin and administrated by "Sevryba" (North-Fish) with operative location in Murmansk. The main responsibilities of this organization were following:

1. represent and extent the Ministry of Fisheries, located in Moscow;
2. Administrate and coordinate all economic activities connected to the fishing industry in the northern basin.

In other words, "Sevryba" had a wide range of responsibilities including resource management and quota allocation as well as, scientific research, and industry development (Kuznetcova 2004: 9). The administrative apparatus also included such an important unit as sales organization "Sevrybsnab" (North Fish Supply), which was targeted on allocation of raw fish materials to the various processing facilities in the North-West of Russia and father supply of finished fish products all over the Soviet Union. The main point to be made here is that all fish caught by the Russian fleet had to be landed at the domestic ports of the northern basin and all fish stuff produced on the regional fabrics, with a very few exceptions, had to be delivered to the domestic market (Rybnaya Stolica 14/ 2003:6).

In the end of 1970s-begging of 1980s Northern Russian Fishery faced the problems of overproduction and production distribution. Due to the lack of meat products and overstocking with certain fish production, Mandatory Fish Days was implemented, when in the all restaurants and canteens only fish courses had been serving. Difficulties in production distribution appeared as a result of limited assortment, inconvenient for individual consumer packing (3-5 kg canes, low expiration dates due to absence of vacuum packing, un-established fillet production from pelagic species and etc.), what led to the loss of attraction of the fish food production for the population-core customers (Tishkov 2000:10)

Soviet fishery missed the progress trend of fish processing and its supply to the market in a convenient and attractive form, what all western countries have been doing for a long time already.

### 1.1.3 North-West Fishery and New Economic Programme

During 1980s efficiency deceleration and economic stagnation started to be obvious. Central Committee of CPSU made a decision to lunch a new economic Programme ("Perestroika") to recommence economic growth. One of the main directions of this Programme which is highly affected Russian Northwest fishery was decentralization of foreign trade. Thus, In the end of 1980s, when the catch of fish and other seafood amounted to 1, 5-1, 7 million of tones per year and the fish food production -1, 1-1, 2 millions of tones per year (23% of entire Union production), export of fish food production started to be equal to 18, 5-19, 5 %.

As the result of the new policy, in the North West Region of Russia the decision to export some part of the frozen fish products to Norway was made and set a begging to the father establishment of close cooperation between two neighboring countries (Rybnaya Stolica 14/2003: 6).

### 1.1.4 North-west fishery in transition towards market-based economy

Further, the collapse of the Soviet Union and tremendous institutional change opened a completely new era for the fishing industry. In 1992, when the Soviet economic planning system was abolished and supplanted by a market-based economic regime, "Sevryba" was reorganized into a private joint-stock company (Hønneland, Nilssen 2000: 641).

So, nowadays the Fish industry complex of the region is presented by more than 170 fish catching and fish processing enterprises. Reorganization of industry has led to subdivision of big enterprises and the development of small-scale business. In 1999 in the fishery industry of Murmansk region was functioning 201 enterprises against 26-in the year 1992. Almost all enterprises are private and 86% of them belong to the small-scale business sector. The majority of registered enterprises specializes in the catch fishery and carries on the fish processing and conservation activity on board (Evdokimov 2002: 5, 6).

Due to increased operating costs it wasn't profitable anymore to be engaged in the Ocean fishery and companies started to withdraw from the long-distant activities. The results of this situation first of all affected the regions of Russian fishing fleet dislocation and the volumes of catch. But now neither central no regional administrations have economic instruments which could influence the behaviour of independent stock companies (Rybnaya Stolica 14/2003: 6).

Within ten years period before break-up of the Soviet Union annual catch amounted to 1,6 thousands tonnes and from the year 1993 the catch was reduced till 700 tonnes, where the catch in the far areas of World Ocean represents a rather insignificant number. Since all fish caught in the distant waters of World Ocean used to go to the domestic market, the significant reduction of catches left Russian population without valuable fish and seafood products.

During the last five years average annual catches of Russian Federation was estimated to be equal to 3,4-4,5 millions tonnes. Bio-resources caught in Northern Atlantic amounts to 780-1150 thousands tonnes and, as it can be seen from the Figure 4, this number continues to grow. The biggest part of the catch in the Northern Atlantic is being provided by Northwest region and Barents and Norwegian seas (90%).

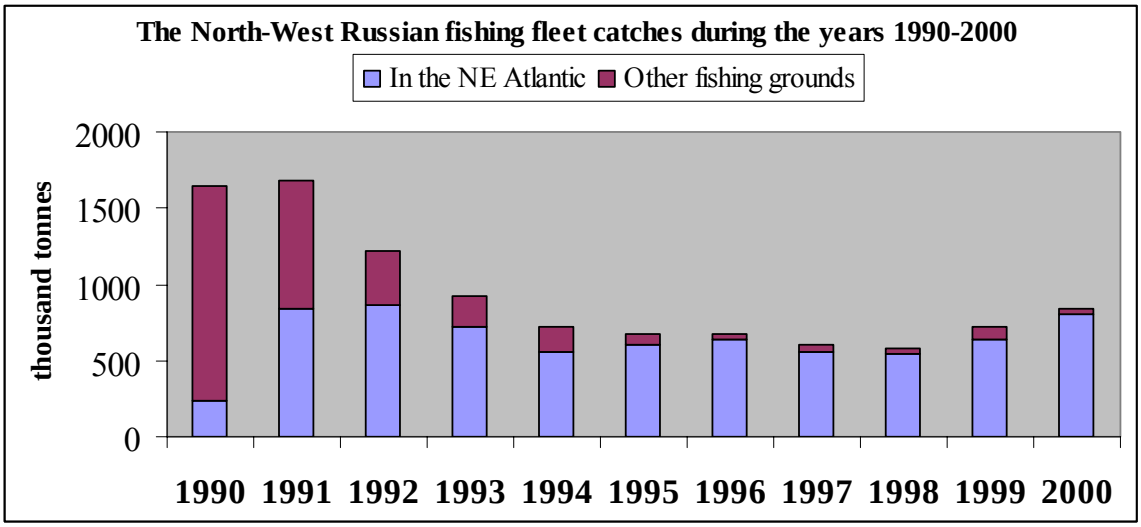


Figure 4. The North-West Russian fishing fleet catches during the years 1990-2000 [2].

Barents Sea in its turn represents an area of intensive fishery for white species of fish, where cod is of the most interest. Re-orientation of fleet towards North-west Atlantic connected not only with scientific recommendations and TAC, but first of all with raised standards towards fishery and the size of fish supplied on the western markets (*Fish Industry* 2/2003: 26,27).

If during Soviet times the major focus was made on pelagic species of fish such as mackerel and herring, introduction of new market-based economy shifted focus of the fishing companies towards more expensive species of white fish. (Bobylov 2002: 28, 29). The major interest now is given to the cod, which is in a high demand in the countries close to the fishing grounds and generate relatively high income combined with less effort as it is the case with pelagic fishery (Nilssen 2003:9).

[2] Source: Compilation made by Nilssen (2003) and based on figures provided by State Committee of the Russian Federation on Statistics and Kola Science Centre, the Russian Academy of Science 2002.

The market mechanism of new administration, based on the principles of profit maximization and the absence of legal and economic ways of control from the state led to sharp decrease of the efficiency of the cod fishery and stimulated its export re-orientation. This way, the main market for cod established was not a North-West Russian but Norway.

More than 80% of cod catch of Murmansk fishing companies is being exported abroad.
Nowadays, the large proportion of the North West Russian fleet is out of date. Maintenance, repairs and building of new vessels were mainly done at foreign shipyards and paid trough deliveries of fish, because the federal government in Russia is not allocating investment funds to the fleet anymore (Zilanov 2002: 8, 9).

As a result of this the lion's share of Russian cod quota started to go abroad and only 10% of it is being supplied to the domestic market.
The cut-off of supplies to the home market has led to high unemployment among long-based workers depended on the fishing industry. Onshore fish-processing facilities now operate at only a small fraction of their capacity. How much regional budget has lost due to this activity really hard to say but the fact that it was a lot of money is obvious.

Since, collapse of the Soviet Union the trade for white fish and especially for cod has been characterized by Norwegian companies buying Russian catches. During last 15 years 60 percent of registered north-arctic cod catch was supplied by Russian fleet. Import of fish to Norway has traditionally been a subject of a very strict legislation. Foreign vessels could not land fish without clear permission from the Ministry of Fisheries. However, from the end of the 1980s the combined pressure of resource decline in domestic waters and the dissolution of the Soviet Union led to a much more

liberal implementation of this legislation. In 1992, the Fishing Limit Act was changed and foreign landings were allowed as the default.
This situation has been a rather profitable for Murmansk companies, in a view of the fact that they sold cod at higher prices and more favorable terms of payment and at the same time they carried significantly lower running costs and was provided by established service system from the Norwegian buyers. Moreover, the short distance from the fishing grounds made Norway a very attractive and convenient place for Russian landings (Shevchenko 2003: 7).

In summary, the main reasons why Russian fishing companies sell catches of cod to west are:

- Significantly lower running cost:
- by not calling at Russian ports, vessels are able to avoid costly and time consuming red tape
- companies also avoid paying the heavy tax imposed on vessels, which have been purchased or upgraded abroad, equal to 25 per cent of the amount invested
- it takes smaller period of time to service vessel abroad than in Murmansk
- foreign ports provide a higher level of services for both crew and vessel
- Fish could be sold in foreign ports at higher prices and more favorable term of payment:
- foreign customers pay straight away, while cash-starved russian customers usually have to be given credit
- Ships' officers and fishermen received a share of the proceeds from sales abroad in the form of an untaxed "currency allotment"
- the old Soviet distribution system has fallen apart and transportation costs within Russia have changed dramatically

However, by 2003 the trade pattern of Russian companies has changed significantly. The amount of Russian white fish landed at Norwegian ports has dropped dramatically and a huge amount of cod has started to go to European markets, (UK, Germany, Denmark, Iceland, Spain, Portugal, Sweden) Canada, China and USA. This situation put Norway into the position where the country is missing a huge part of raw fish material which was provided by Russian fleet during all this years.

What are the main factors, which have influenced the recent change in the pattern of trade system and how this extensive shift in the Russian trade for cod has influenced activity of regional fisheries companies are the main focus of this work.

### 1.2 Research setting and perspective

The intention here is to show how the companies and organizations change their behaviour and strategies under the different institutional arrangements.
In this work the interest would be set on economic performance and trade. Since the investigation was conducted in Murmansk Region where fishery appears the primary economic sector, the industrial setting applied here is the fishing industry.
It is the common knowledge that Higher-order institutions constitute the "rules of the game"[3], in terms of superior rules and regulations, and represent different working conditions that affect the behaviour of organizations. The matter is that organizational behaviour in Russian fishery sector is a result of the transition economy mixture which is based on the planned-economic higher order institutions and influenced by the market-based economic rules.

[3] The Institutions was defined as the "rules of the game" in 1991 by Douglas North in his work "Institutions".

To illustrate this and show how the Russian fishing companies have adapted to the new conditions the individual fishing company would be selected as a case-study[4]. Although the main direction of the work is based on the case-study, this thesis has also descriptive and explorative aspects, when the main relationships between chosen organizations and entire regional fishing industry would be investigated and compared in order to establish the common trade pattern for cod and other species of white fish in the Northwest Russian fishery.

In order to do so successfully the following **research questions** have to be answered:

- What are the main factors, which caused the recent change in the trade pattern for cod in the Murmansk region?

- How the regional fishing companies adjusted to this changes and what strategies they choose?

It was not easy to give the precise answers for these research questions, in the beginning of the project, and explain the main reasons for change in the trade pattern for cod in the North-West Russian fishery; however the working **hypothesizes** were composed:

**H1** The main driving force which has influenced the recent change in the trade pattern is the increased price for white fish on the global arena and poor state of the national market.

[4] Research design and selected case-study will be presented in more details in the next chapter.

**H2** The structural change within input prices (fish auctions, fuel costs) discourage regional fishing companies to deliver white fish to the home ports.

**H3** Unfavourable investment system impose 25% tax on the vessels purchased or upgraded abroad and induce fishing companies to deliver catches to the western markets.

### 1.3 Organisation of the thesis

The focus of this work is to investigate how the higher-order institutions has affected the behaviour of Russian North-West fishing organizations and changed their trade pattern for cod and other species of white fish.

In order to do so I organized this work in seven chapters.
First chapter gives the reader a general introduction into the Russian North-West fishery and highlights the existing phenomena.

The second chapter introduces the research design and the methods of data collection and interpretation.
The third chapter outlines the theoretical framework of the study and bases on the institutional theory. The main purpose of this chapter is to analyse how existing institutional framework can influence behaviour of organizations and change their strategies.

The fourth chapter is the case-study of the biggest Russian North-West fishing company, which is the basis for further empirical analysis.
Chapter five and Chapter six provide an empirical analysis of existing phenomena and describe how and to what extend institutional framework changed the trade pattern for

cod in the Murmansk region. However, the major findings which explain the shift of the trade pattern are presented within chapter six.

Chapter seven argues whether the change of the trade pattern for cod and other species of white fish is a reasonable solution for strategic growth and profitability of Russian North-West fishing companies.

# 2. Research design and data collection

The purpose of this chapter is to give a breath explanation of how the data necessary for this research was collected and what methodological design has been used.

## 2.1 The research design

The objective of the Thesis is to study how the higher-order institutions have influenced and changed the trade pattern for cod and other species of white fish in the North-West Russian fishery. At this point it would be necessary to *identify and describe* the main factors which have caused this change and *explain* how the Russian fishing companies have adjusted to this situation.

The research design chosen in this work is a *case study* expanded with a descriptive design over entire fishing industry in the Murmansk Region, what will help to achieve in-depth analysis and examine different types of changes and their consequences.

The research design has to represent a logical sequence of statements and satisfy crucial parameters such as: *construct validity*, internal validity, *external validity* and *reliability* (Kidder T.: 1981).

In case-studies, the construct validity is the most problematic issue, since it is always a challenge to develop a sufficiently operational set of measures. Thus, it is very important to define a significant and specific event which can be set as a main reason for occurred “change”. Change always covers a wide variety of phenomena. In this work, change discussed as the consequence of shift from planned economy towards new market-based one and establishment of new institutional framework.

To meet the construct validity I tried through the following steps:

1. I selected the specific type of change and defined it as an objective of the study.
   Where, the recent change in the trade pattern for cod and other species for white fish among North-West Russian fishing companies is the main focus.

2. I tried to select measures that can reflect and explain occurred change. Thus, different statistical reports reflecting: the amount of catches, species and price composition of catches, the main destinations of deliveries, fleet structure and many other data was collected and analysed.

The external validity is another challenge especially when it comes to case-studies, because it is not that easy to determine whether the findings are generalizable or not. Thus, it is very important to choose a correct "sample" which can be generalized to some broader theory. In this work it was decided to select a fishing organization which has a wide experience in the North-West Russian fishing industry and a significant share in total cod, and white fish catch and production.

An organization considered being highly relevant for this project is "Murmansk Fishing Company". Due to ethical reasons the initial name of the company was changed. It was a necessary measure to keep privacy of the company and protect important commercial data from receiving publicity. But some of the main figures are shown below to illustrate that particularly this organization with relatively long experience and top place rating in North-West Russia, can be a good sample for change analysis.

"Murmansk Fishing Company":

- One of the Russia's largest fishing enterprises
- Founded in 1920, one of the first enterprises in Murmansk (over 80 years of experience in the fishing industry)
- 1st place in the top of Northwest Russian Produces of fish and Other Sea Products in 2000 with:
    - Profit=12, 4 mln. USD
    - Sales=75, 5 mln. USD
    - volume of output=171 120 tonnes
- The Murmansk Fishing Company owns 86 fishing vessels
- The Murmansk Fishing Company catches 8% of Russia's total fish catch
- Up to 65% of the manufactured products go for export
- The main object of fishery is cod and amount up to 75% of total catch

Reliability of this work was achieved by making all research steps as operational as possible. For this reason, case study protocol was designed and used during the data collection. All data were collected in accordance with research questions and across the full range of appropriate settings, times and respondents. Research questions were made simple and clear and congruent with features of the research design. Taking into account that reliability depends on its connectedness to theory (Miles, Huberman 1994: 278), I tried to make basic paradigms and analytic constructs clearly specified.

The data collected within Murmansk Fishing Company were checked for quality during data collection stage (bias, deceit, informant knowledgeability) and more controlled data type were preferred. To ensure the reliability of data collected outside Murmansk Fishing Company, while analyzing and making review over entire fishing industry of Murmansk region, I chose to select information from Authoritative sources as: State Committee of the Russian Federation on Statistics, Federal Agency of

Fisheries, Polar Research Institute of Marine Fisheries and Oceanography, Norwegian Institute of Fisheries and Aquaculture Research, Norwegian Row Fish Organisation and etc. In order to develop reliable picture of existing phenomena I tried to draw meaningful parallelism between qualitative and quantitative data.

Thus, the main direction of the work is based on both, case-study and descriptive design what will help to explore and define in a full measure how the institutional change and introduction of a new market based economy affected the behaviour of fishing organizations and influenced their trade patterns.

## 2.2 Data Collection

There are many different ways and methods to collect the data. However, working thought the collected material can be very complicated and time consuming. Thus, in this work I tried to choose more structural approach which can help me to successfully answer research questions.

The data for this project was collected within 1, 5 years from August 2004 till February 2006. This investigation has been made in several steps and with use of different data.

The results from wide range of documentation, archival records and interviews were combined and analyzed in order to maintain the chain of evidence.

According to Robert K. Yin: *"Evidence for case studies may come from six sources: documents, archival records, interviews, direct observation, participant observation and physical artifacts".*

The first phase of the project included ***primary data*** collection through structured personal interviews with representatives of the chosen Case-study company and later with representatives[5] of an industry and research institutions.

The main purpose of this was to achieve an understanding of today's condition of fishery sector in Murmansk region and to make an attempt in identifying the main factors, which has caused the recent change in the trade pattern among regional fishing companies.
All interviews were conducted whether in open-ended or focused natures. In the first case, key respondents were asked about their opinion according to main research questions and interview carried more conversation-like character.

Another part of respondents were selected for focused interviews, where they were asked according to certain set of questions from the case-study protocol[6].
To avoid misunderstandings many of the most important questions where asked several times. In order to eliminate the tension during the interview and make it more comfortable for informants tape recorder was not used, but all conversations was noted and lately systemized.

It was important to select informants not randomly but according to particular qualifications such as: status, specialized knowledge and experience and accessibility (Phillips L.W.1981: 396).

The father data collection method used in this work is ***secondary data*** collection and document analysis.

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[5] For the list of the interviewed respondents see Appendix 1

[6] For a discussion on interview's procedures and questionnaire's examination and criteria see for instance Houtkoop-Steenstra H. 2000.

*"In general, secondary data can be described as data that already exists in some form"* (Nilssen F., 2002: 119).

*"Document analysis: Collection, review, interrogation, and analysis of various forms of text as a primary source of research data"* (O'Leary Z., 2004: 177).

The main sources of secondary data gathered during document analysis include: historical archives and statistical reports from selected company (Murmansk Fishing Company), newspaper articles and academic publications, Governmental resolutions and decrees.
The conceptual part of this work is highly based on ***empirical*** data and was written by use of qualitative research methods.

The most important thing about qualitative data is that it focuses on ordinary events in natural settings. Qualitative data has a strong potential to reveal complexity and provide "thick descriptions" which are vivid and nested in a real context. Such a data selected over a sustained period of time makes us assess causality and study any process. Qualitative data have a strong potential for developing and testing hypothesis and seeing whether specific predictions are right or wrong. We need it to explain and reinterpret quantitative data gathered from the same setting (Miles, Huberman 1994: 10, 11). The research questions, set in this work, were made to operationalize the conceptual framework. They were formulated at the outset and adjusted during fieldwork.
There are many ways to collect empirical data but the method chosen here is called *"Snowballing".*
This method based on the acknowledged means of literature search. I started from the selection of articles from the main fishing magazines, e.g. Fiskaren, Fiskeribladet, Fish Capital, Fish Resources, Murmansk Fish Resources, Fishermen News, and Fish Industry. It helped me to build up the framework for relatively good understanding of

existing situation on a Global white fish market. A conceptual framework explains both graphically and in narrative form the main objectives of study, the key factors, constructs, variables and relationships among them (Miles, Huberman 1994: 18). "Snowballing" method provided me with a working material dating from 2005 and backwards. In order to keep the track of recent changes and latest developments which can directly influence the existing body of a research, the systematical search for the recent publications was used on a weekly basis. In order to answer the research questions and cast the new light on qualitative data, I tried to complement qualitative information with numerical data set and link them. To make quantitative data more systematic and explicit computer software were being used. Almost all quantitative analysis was based and build on by use of Microsoft Excel Program (Berk 2004).

Since the majority of data collected for this project were represented in Russian and Norwegian languages it has been a true challenge to interpret them correctly and translate into English.

# Chapter 3: Institutional Theory and organization behaviour

The aim of this chapter is to investigate whether institutional theory is a useful concept in the study of Russian North-West fishery and could be applied as a theoretical explanatory framework on recent change of trade pattern for cod and other species of white fish in the Murmansk region.

Institutional theory is a powerful tool which can explain existing political and social behaviour (Peters and Pierre 1998: 565) as well as deal with issues related to external working conditions of the organizations (Nilssen 2002:43).

During recent years the institutional theory has been widely used to illustrate how institutional arrangements in countries and societies influence the behaviour of organizations and create business environment (Oliver 1991).

## 3.1 Higher-order Institutions

The study of institutions is presently rather high on the agenda of the social sciences. However there is no consensus in what is meant by institutions since the terms differ with schools and conceptualizations. There are many different approaches as new and old institutionalisms (Stinchcombe 1997; Hodgson 1998) or historical institutionalism (Zysman 1994; Katznelson 1998). Moreover, several social sciences also have their own approaches to institutional theory (Hall and Taylor 1996; Eggertsson 1990; Scott 1994; Hechter and Kanazawa 1997).

Douglass North in his book "*Institutions, Institutional Change, and Economic Performance"* (1990: 3) defined institutions as 'rules of the game in a society'.

To North (1991:97), higher-order institutions have been established to create order in society and reduce uncertainty and can be defined as*:" the humanly devised constraints that structure political, economic and social interaction. They consist of both informal constraints (sanctions, taboos, customs, traditions, and codes of conduct), and a formal rules (constitutions, laws, property rights)".*
According to Andrew Schotter (Schotter 1981: 155), the institutions are not 'the rules of the game', but the behaviour which follows from rules.
However in this work I will agree with Douglass North and use the 'role' concept of institutions.

### 3.2 Institutions and Organisations

Douglass North (1990) argues that institutions and organizations are distinct entities and which organizations come into being and how they perform through time is influenced by a society's rules and norms ('institutions').
According to Nilssen (2002), the institutional framework consists of both higher-order (macro level) and lower order (individual organization) institutional levels. Where higher order institutional level describe fundamental working conditions for industrial organizations implemented by state or other governmental organizations and lower level explains the organizational behaviour.

In the broader sense, higher order institutions may be seen as external working conditions for business and industrial organizations. It's necessary to define that institutional framework consist from two parts: formal part and informal one. The formal part represented by laws and regulations imposed by superior state bodies and can't be easily influenced by organizations (Peng and Heath 1996: 499,500). But in the long run, organizations have their influence on interpretation and execution of formal institutions trough their participation. As a result it can be argued that

organizations are not only influenced by institutions but also have a significant influence on institutions in return (Nilssen 2002).

### 3.3 Institutional Analysis of business environments

We are living in a time of global transformation and institutional change, which is illustrated in this work by transition from the Soviet System to complete new market - based one. The absence of knowledge how to build new institutions is one of the crucial problems in our societies.

Organizations tend to adjust to their environment, but as we can see with the case of Northwest Russian Fishery, they are still products of the past and still influenced by historical norms, rules and values they are used to.

| | |
|---|---|
| Institutions | Basic norms, rules, conventions, habits and values of a society |
| Institutional arrangements | Markets, states, networks and communities |
| Institutional sector | Financial system, educational system, business system |
| Organizations | Organizational structures |
| Outputs and performance | Administrative decisions, quantity and quality of industrial products |

Table1. Levels of institutional analysis[7].

What differ institutional analysis from other types of organizational analysis is the focus on rules, which are prescriptions to permit, forbid or require some outcome or sanctions if rules are not followed.

[7] For more information see Hollingsworth (2000).

Rules can be formal and represented by laws, policies or regulations and informal as social norms (Imperial and Yandle 2005: 494).

In the context of fisheries management, it focuses on such things as the organization of the fishery: who makes decisions, how decisions are made, the rules used to allocate and distribute resources (quota system), rules governing the behaviour of fishing organizations and rules of enforcement (Imperial and Yandle 2005: 494).

### 3.3.1 Norms, rules, conventions, habits and values

Thus, the first level of institutional analysis is represented by fundamental properties of institutions, which are basic norms, rules, habits and values (See Table1). Since there is a considerable stability in the norms, rules and values of a society during most periods of history-first level is the most enduring and resistant to change (Hollingsworth 2000).
Both human and organization activities are organized, regulated and shaped according to existing norms, rules, conventions and values. They influence who can be included in decision making and how information is structured and processed (Shepsle: 1989). Every society has a multiple rule systems which establish cognitive framework for individuals and organizations make their environments more predictable and provide with necessary information.

According to Johnson (1992: 26), *'Institutions reduce uncertainty, coordinate the use of knowledge, mediate conflicts, and provide incentive systems. By serving these functions institutions provide the stability necessary for the reproduction of society'.*
In 1997, Legro suggested that robustness of rules and norms can be assessed by three main criteria: simplicity, durability and concordance. First criteria apply that the rules and norms should be simple and give all actors within a society a clear understanding of what these rules are about. They should help organizations and individuals to apply

existing rules and values to different complex situations in order to help them to make a right decision. Durability represents the issue of legitimacy and how long norms and roles have been in affect. Concordance deal with extent of the norm or rule and how spread they are.

*'Hence, the more robust the norms and rules are, the greater their impact on a society, and the less their robustness, the greater their flexibility and the less their effect on shaping a society's outcomes and performances'* (Hollingsworth 2000).

### 3.3.2 Institutional arrangement

Institutional arrangements are the second level of analysis (See Table1) which is involved with coordination of different economic actors, such as producers and suppliers, financiers and government. All of these actors deal with resolving different problems exiting within a society and the society has to develop a variety of institutional arrangements for their coordination. Each of these institutional arrangements has own logic rules for enforcing compliance, as well as its own norms to reduce the cost of enforcement (Hollingsworth 2000: 609). The state is the ultimate enforcer of the rules for the various mechanisms as property rights, fiscal and monetary policies. Furthermore, it is the State what influences the entire incentive system of our society (Johnson 1992: 40).

Here a lot depends on the leaders both on federal and regional levels, their professionalism and ability to take economically effective decisions (Zilanov 2004: 4) For example, unreasoned liberal reformation of Russian fishery by Ministry of economic development and the row of unsuccessful decisions from Goskomrybolovstvo (State committee of Fisheries) led to the present situation of North-west Russian fishery: reduction of fish production and export orientation of industry.

But if there were a society coordinated only by a state, it would be too much rigidity and too little diversity to cope with uncertainties existing in a global environment. To be robust institutions must be based on multiple and diverse principles and logic of actions.

Fisheries management programs are as a rule based on free types of institutional arrangements: bureaucracy-based, market-based and community-based (Imperial and Yandle 2005: 495)[8].

In the bureaucracy-based arrangements, which is the case of Russian fishery, the property rights for fish and other bio-resources are held in the hands of government on behalf of the public. Thus, the major focus is targeted on determining the total allowable catch and developing the regulations which can maintain fish stocks at the existing level. However, rules can also be crafted that restrict entry or push out small fishing companies (quota allocation system and quota actions), what can creative incentives for violating the rules, over fishing and other cheating behaviour (Imperial and Yandle 2005: 495, 496). The process of developing fishery management plans in Russia is highly politicized. Conflicts between government and fishing companies make policy change costly and time-consuming. Consequently, the ability of Russian fishing industry to adapt to political and economical changes taking place in the country is significantly reduced.

[8] Charles (1992) identified these institutional arrangements as the conservation (bureaucracy-based), rationalization (market-based) and social community (community-based) paradigms.

### 3.3.3 Institutional sectors of a society

An institutional sector represented by all organizations in a society which supply a certain product or service and also include: educational and research systems, financial markets and system of training, as well as legal system and the sate (See Table 1).

All these institutional sectors have a tendency to cohere which each other, although each of them has some autonomy and objectives, which could be contradictory to the objectives of other institutional sectors they are linked to.

When it comes to configuration of institutional sectors, they as a rule, exhibits a certain degree of adaptability to the uncertain conditions and new challenges, but still keep evolving within an existing style.

That is why it's important to say, that institutional arrangements and its structures of specific institutional sector can't just be transferred to another country or society. Countries, who borrow effective principles of foreign management practices, need to understand that those borrowings can't be effective since economic behaviour and performance are shaped by specific social systems with own rules and logics (Hollingsworth 2000: 609).

### 3.3.4 Organizational Structures

In all societies organizations have their own rules and norms within which they're embedded. However, the strength and power of institutional environment can vary from society to society and shape the culture and structure of organizations.
The societies which have multiple institutional environments and are heterogeneous have a great variation in the structure and culture of business firms, which have

significant autonomy and flexibility. However, they experience the variety of conflicts in terms of institutional regulations. For example, what institutional logic has to regulate specific functions of different organizations. In other societies, where there is less variation within institutional norms and regulations, institutional pressure is greatest and organizations have less autonomy (Hollingsworth 2000: 609).

### 3.3.5 Outputs and performance

Different social systems and institutional arrangements as a rule result in different types of economic performance of organizations and maximize different performance criteria as a profit, security, economic or political power. So, looking at the output and economic performance we can state how good a society is performing.
One of the most important issues is whether existing organizational arrangements, which support a set of routines for a particular industry, can sift from old practices to new ones.

## 3.4 Higher-order Institutions and Institutional Change

The success of transition and economic transformation depends heavily on comprehensive political and legal reforms, where institutional change is one of the most important ones.
According to Aoki (Aoki, 1990), changes on a national level can cause a serious change of institutional environment of organizations which will influence their internal structure and behaviour pattern within a specific industry.

### 3.4.1 Transition from planned to market-based economies

The transformation which Russia made from planned to market based economy have greatly affected the structure and performance of the Northwest fishing industry.
The main aim of this transformation was to switch from planned economy to a market one, were both politic and economic systems had to be changed.
The system of planned economy was designed to achieve all-union macro-economic targets. It was operationalised and quite well functioning (Nilssen, 2002).
One of the main reasons behind the decision to change planned economy to market one was the lack of productivity and economic growth in the old system (Peng and Heath 1996).

| Criteria | Planned Economy | Market Economy |
|---|---|---|
| Decision making | Highly centralized, bureaucracy is taking economic decisions in all levels and areas | Autonomy of companies, limited or no interference of state |
| Information gathering | Top down planning process | Price-market mechanism |
| Ownership of the means of production | State-owned companies | Private property |
| Motivation | Moral and material incentives directed at the fulfillment of national economic plans | Maximizing of profits development of individual personality |

Table2. Contrasts of Planned and Market Economics[9].

[9] Source: Springer and Czinkota 1999: 30.

In the planned economy orders were handed down by the national economic plan, the party and state bureaucracy. The decision process was represented by a top-down model, where an interaction across hierarchical borders was almost impossible. Company directors were not allowed to take risk by their own and were obligated to wait for an order from above to make a necessary decision.

Moreover, all property rights were held by the State. During the years of transition companies gained independence and learned responsibility to take own decisions. They shift their business strategies from long-term oriented they used to have under the planned economy to a short term one directed on survival under the new conditions (Springer and Czinkota, 1999).

But the most important components in the reconstruction of planned economy were reform of existing planning apparatus and significant extension of foreign trade.

By the end of 1991 the majority of higher-order institutions which were forming economical activity in Soviet Union were dissolved and the new institutions such as: marked formation of prices, commercial banks, readjustment of public administration, privatization and consequently, new management came into force (Nilssen, 2002).

This transition from market to planned economy brought a new political, economic, financial and legal framework for business. Where existing gaps between framework changes slow down the process of transition and lead to many conflicts and backward-oriented decisions by local politicians and managers. (Springer and Czinkota, 1999)

The core of the problem was at industrial enterprises during Soviet Union period was developed and adapted to work under certain conditions and specific institutional framework and it took a time before they started to adjust to the new rules and regulations (Dolgopyatova 1995).

According to Nilssen and Hønneland, the new institutional arrangements in Russia forced fishing companies to a new adaptation and since those changes in high-order institutions have not been entirely successful, there still are some negative elements present in Russian institutional arrangements that hinder transition toward market economy (Nilssen and Hønneland 2001:313).

### 3.4.2 The three pillar of institutions

According to Scott (1995), the behaviour of organizations in transition economies can be explained by a "three pillars" theory. The three "pillars" define different aspects of institutions and consist of regulative, normative and cognitive elements.
These elements represent a superior governance structure of higher-order institutions which influence the process of organizational adaptation in the given institutional environment.
It can be shown in the Table 3, where the columns represent the three main elements/ "pillars" of institutions and rows represent the principal dimensions.

| | Regulative | Normative | Cognitive |
|---|---|---|---|
| Basis of compliance | Expedience | Social obligation | Taken for granted |
| Mechanism | Coercive | Normative | Mimetic |
| Logic | Instrumentality | Appropriateness | Orthodoxy |
| Indicators | Rules, laws, sanctions | Certification, accreditation | Prevalence, isomorphism |
| Basis of legitimacy | Legally sanctioned | Morally governed | Culturally supported, conceptually correct |

Table3. The tree Pillars of Institutions[10].

As the table 3 reflects, there are three main mechanisms which influence the organizations behaviour: coercive, normative and mimetic. *Coercive* mechanism is represented by supra organizational body or powerful authority (Roth and Kostova 2002: 216), which is by means of lows, incentives and punishments regulate and prescribe behaviour of organizations.

[10]Source: Scott 1995: 35.

*Normative* mechanism deals with social acceptance and social responsibility, which operate as a regulative force. *Mimetic* is a standard response to uncertainty by adapting the patterns of other, more successful organizations (Roth and Kostova 2002: 216).

As was proposed by Nilssen and Hønneland (2001), the *regulative* aspect of institutions influence the future behaviour of organizations through the three main mechanisms:

- *" The capacity to establish rules*
- *The inspection or review of the conformity of others to rules*
- *Manipulations of sanctions/incentives (punishment or reward)"*

During Soviet times, the capacity to establish the rules was an important governance mechanism, which was giving instructions to enterprises on how to act under certain circumstances in order to achieve the desired behaviour. Different governmental bodies were prescribed to run the inspection of industrial organisations to check the compliance with orders fulfilment. As well as, sanctions and incentives were established to prevent any undesired deviation from plan and initial targets.

On the other hand, *normative 'pillar'* evaluate institutions not only by their instrumental performance, but takes into account a wide range of ethical values, which may vary from society to society. Normative rules obligate organizations to operate within a defined social framework in compliance with existing values or norms, such as sustainability or social responsibility.

The *cognitive' pillar'* is more represented in the Western economies *and* can be characterized as a voluntary adaptation of industrial organizations to the existing environment. In other terms, organizations copy behaviour of the best performing organizations in order to respond to uncertainty (Nilssen, 2003).

Thus, when we are talking about transition economy in nowadays Russia it is important to highlight that it can't be characterized only by one institutional 'pillar' since the situation is too complex. The key could be found in a more mixed solution and represented both by regulative and cognitive 'pillars', where regulative 'pillar' is more dominant.

### 3.5 An institutional perspective on organizational behaviour

In order to understand strategic choices made by companies, the institutional framework in which the company is embedded must be considered and analyzed. The main focus of this work is to investigate how the higher-order institutions affect the behaviour of Russian fishing organizations and to which extend it made companies to change their trade pattern for cod and other species of white fish.
The primary framework, which provides the working conditions for Russian north-west fishing companies and determine their trade pattern for cod is represented on the Figure 5. It illustrates that the trade pattern for white fish chosen by fishing companies highly influenced by existing institutional systems as: Quota allocation system, Legislative system and financial system (Frenkel 2000: 14, 15). To what degree all those systems affect the decisions made by fishing organizations would be discussed in the Chapter 5 and 6.

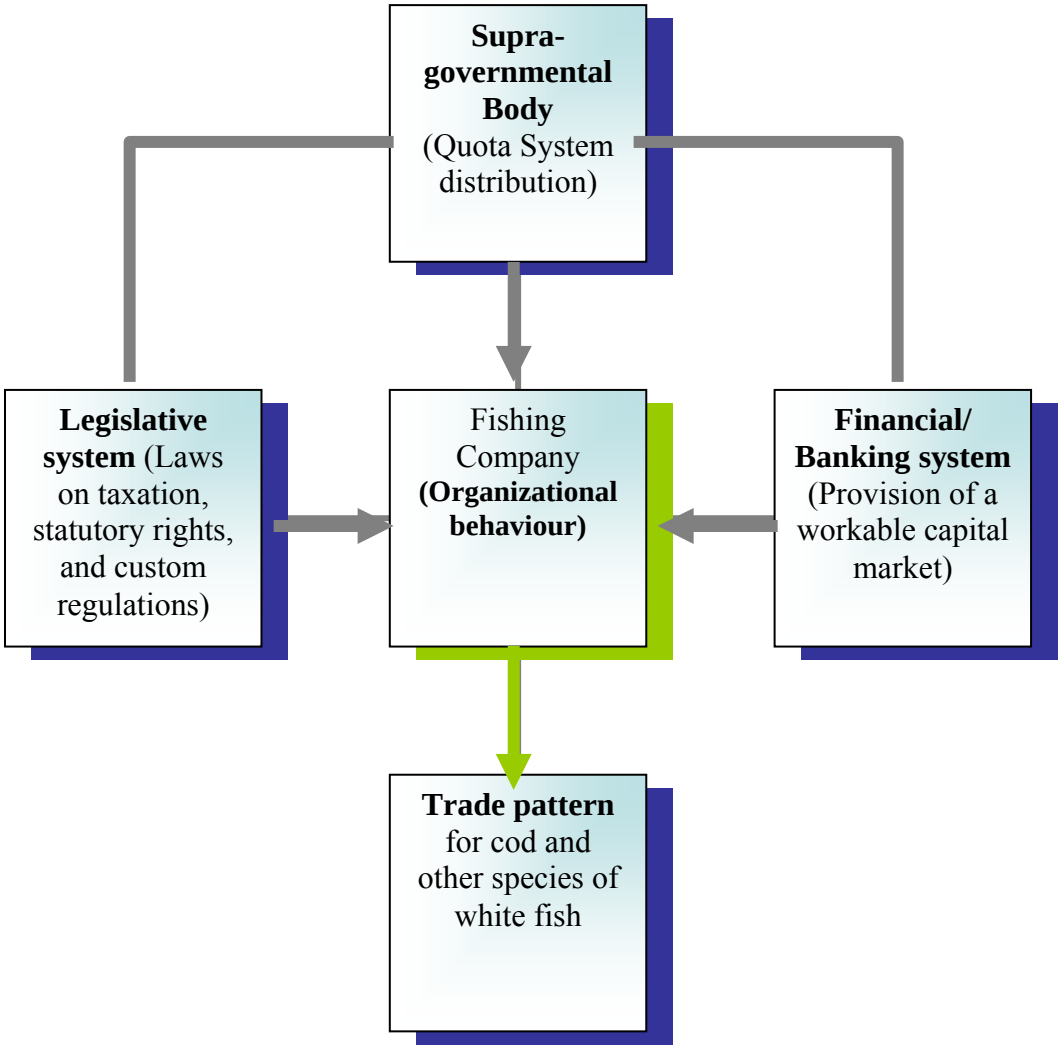


Figure5. Institutional framework of industrial organizations (North-West Fishery)

As it has been discussed earlier, institutions provide the "rules of the game" and shape the framework in which organizations act and compete. This institutional framework influences the behaviour of organizations and affects their strategies.

But the question is: "To what extent the higher-order institutions in planned and market-based economies can affect and shape the behaviour of organizations in transition economies. Opposite to the market-based economy, planned economy was

characterized by comprehensive use of central planning and bureaucratic control. Thus, organizations under the planned economy could be described as state-owned enterprises which take orders from the planning regime and are not concerned about own profitability since the eventual debts can be just written off by the government and covered with operating funds. As a result, during Soviet system there were no room for motivation and initiative (Peng and Heath 1996: 501, 502).

During transition the formal constrains from the planning regime has been weakened and the companies turned into independent decision-making units. The key characteristic of the transition is a fundamental change in the norms, values and assumptions underling economic activity (Newman 2000: 603).
However, the lack of commercial laws and absence of well-defined property rights legal framework plus political uncertainty made the transition towards market economy the longer and more complicated process. Among the other forces which hamper the functioning of market-based economy is the old behavioral path learned during Soviet period, which a lot of companies still seems to adhere (Kuznetcova and Kuznetcov 1996).

A central finding in this research is that the behaviour of Russian fishing companies and the change they made in their trade pattern for cod and other species of white fish is characterized by institutional frameworks they are working in and pressure they get from those incoherent institutional arrangements.
Figure 6 illustrates how the higher-order institutional framework of two different regimes influences the decision-making process of organizations as well as their activity.
The left part of the figure represents planned economy and regulative oriented institutions forms. The right part shows institutional framework in the market-based economies (Nilssen 2002: 174,175).

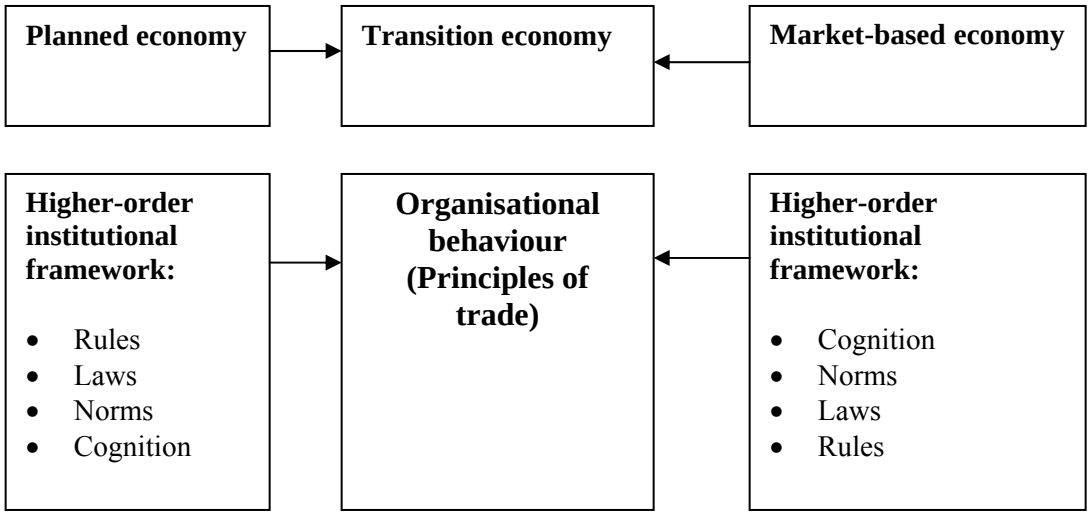


Figure6. The influence of the planned and market-based higher-order institutions on behaviour of organizations in transitions economies[11].

In that way, Russian fishing companies operating within conditions of transition economy are affected by institutional components from both market-based and planned economies. And while market-based economies are being characterized by silence of normative/cognitive institutions, planned economies institutions can be described by the significant role of regulative aspects. In that light, the transition economy of Russian Federation can be seen as a major conflict between cognitive and regulative aspects of the institutional environment.

In this connection, the main focus of the project would be concentrated on how the system's change and the adjustment to the new market-based system have influenced behaviour of fishing companies and shift the trade pattern for cod in the Murmansk region.

[11] This conceptual model was developed by Nilssen (2002: 174) and explains change or variation in organizational behaviour in economies in transition.

# Chapter 4: Adjustment at a Russian fishing Enterprise. A Case-study of "Murmansk Fishing Company".

The Institutional changes facing North-West fishing companies during transition period from planned towards market economy are profound. The biggest companies operating in the region are, as a rule, the bits of the former conglomerate "Sevryba", which had overall responsibility for entire fishing industry and was managing organizations according to the principles of planning system. Nowadays, companies gained own responsibility for all operations and profit has replaced the plan-fulfillment as the main indicator of a company's success (Hendley 1998). In other words, the North-West Russian fishing companies have been placed in a situation when they have to face the real challenge of reorientation and becoming competitive in a market economy. How are the regional fishing companies adapting to this situation and what strategies did they chose would be shown through the case-study.

*"The examination of the behaviour and motivations of economic actors at a single enterprise brings out the strengths and weaknesses of the common wisdom" (Hendley 1998).*

## 4.1 The history of Murmansk Fishing Company

Over the past six years I've been studying "Murmansk Fishing Company" and it's transformation from the one single company to the group of enterprises forming consortium. "MFC" is a good subject for the case-study because it is one of the Russia's largest fishing enterprises with over than 80 years of experience in the fishing industry, who became one of the most successful competitors in the Northwest fishery.

19 March 1920 is the official date of birth of the "Murmansk Fishing Company", when the 12 trawlers (caught 17 thousand centners of fish) were given into the disposal of Belomor Fishery Administration based in Arkhangelsk. By the end of 1925 "Murmansk Fishing Company" owned 17 fishing vessels which could catch over 120 thousand centners of fish. In 1926 all the vessels were moved from Arkhangelsk to Murmansk to be able to fish all the year round. Since 1928 fish products started to be exported. Annually 15-20 thousand centners of clip fish were exported to Italy, Greece, England and Egypt. 19 thousand centners of fish flour were exported to Germany and Holland. Eastern countries bought cod-liver oil. By 1935 there had been 68 vessels, 37 of which were of German construction, 21 vessels of Leningrad Northern Yard, 2 trawlers of pre-war built, 8 vessels came from Far East. Trawlers were not only fishery but also fish processing, they were equipped by fish-flour plants and equipment for producing canned food. The main objects of fishery were gadoid and herring[12].

Mainly, in the period of 1946-1950 the fleet was enlarged by large vessels, which had an opportunity to come into the Northern Atlantic. Year by year Murmansk Fishing Company reached the same position as in the year 1937 when the maximum annual amount of caught fish was 2162 thousand centners. The main fishery regions were Murmansk shallow waters, North-Western central waters, Gusinaya Bank, Demidovskaya Bank, regions of Medvezhij Island, Rybachja Bank, Murmansk bank, and Kildinskaya Bank. Main fishery objects were cod, haddock, herring, sea perch, wolfish, capelin, and flat-fish.
By 1 January 1964 Murmansk Fishing Company had 270 vessels, 240 of which were fishing ones and located in Murmansk

[12] The historical information has been prepared and provided by the technical group of the engineering and design department of the JSK “Murmansk Fishing Company”.

By 1970the following fishery regions were developed: Central-Eastern Atlantic, North-Western Atlantic, South-East Atlantic, Southern Atlantic, shelves of Venezuela, Guinea, Brazil, Uruguay, Hamilton, Georges by Northern Atlantic, Labrador, the South-West of Africa, Arctic waters. The objects of fishery were: cod, haddock, silver hake, capelin, sea-perch, halibut, flat-fish, herring, polar cod, argentine, horse-mackerel, mackerel, sardine, poutassou, ice fish, whiting, wolfish shrimp, and squid. On 8 January 1975 Murmansk Fishing Company was awarded with the Order of October Revolution for important contribution on developing fishery, high effective usage of the fleet and production of fish products. In the same year the fleet was enlarged by more big autonomous trawlers like "Horizont" (Russian construction, Nikolaev). Number of employees reached 17709 people by the 1st of January.

Since 1977 the volumes of fish catch lowered because of licensing fishery in 200-mile economical zone of foreign states, introduction of limited quota, reduction of recourse of bottom fish, but the fishermen of the Murmansk Fishing Company went over the planned performance and caught 666538 tons of fish in 1978. The fleet was constantly enlarged- in 1984 by new vessels like BAT and PST like "Barentsevo more", in 1986 by 15 SRTMs like "Obolon", from 1988 to 1993 - by 12 super trawlers like "Moonzund" (German construction). Vessels were equipped by modern fish-exploring, fishery and fish-processing equipment.

On the state on 30 November 1988 there were 13709 employees in Murmansk Fishing Company. The catch of the State Enterprises of the Northern Basin in 1990 was 1316138 tons, among them 600411 tons were of Murmansk Fishing Company, which was over 45% of the total amount. So for 80 years of its existence Murmansk Fishing Company has achieved great results, it continues to enlarge with ships of new generation[13].

[13] The historical information has been prepared and provided by the technical group of the engineering and design department of the JSK “Murmansk Fishing Company”.

In 1997 6 vessels of the latest models were constructed in Germany by request on the Fleet. At the same time modernization of old vessels is being held, strong equipment is being installed. Vessels of Murmansk Fishing Company are almost in all parts of the World Ocean. The production of Murmansk Fishing Company is of a very high quality. The Company has been twice awarded with the highest award of western business "Golden Mercury".

### 4.2 Organisational structure, ownership and governance

JSK “Murmansk Fishing Company” is a member of The Union of fishing organizations “Consortium Fishing Fleet”.

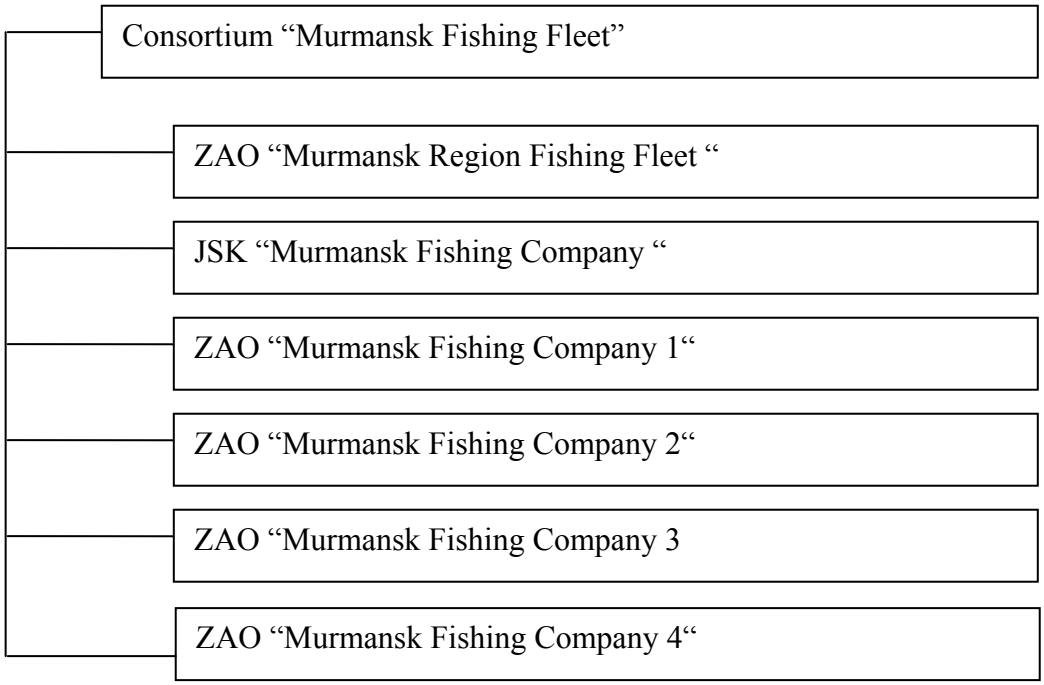


Figure7. Organisational structure of Consortium “Murmansk Fishing Fleet”.

The members of the union are also ZAO "Murmansk Fishing Company-1", ZAO "Murmansk Fishing Company-2", ZAO "Murmansk Fishing Company-3", ZAO "Murmansk Fishing Company-4", ZAO "Murmansk Regional Fishing Fleet" (See Figure 7.).
For the most of its history "MFC" had been a "Show-case" enterprise which illustrated the companies' adjustment to the new quasi-market environment.

During transition period and institutional change, its special status of "region-forming" enterprise and close relationship with a Soviet government led to the fast privatization and breaking one parent company "MFC" into the series of closed stock-joined enterprises (Kudrin 2000: 13).
As a result of this reconstruction, enterprises "MFC-1", "MFC-2", "MFC-3" and "MFC-4" were established and consortium "Murmansk Fishing fleet" was formed in 1997.
But in reality all of these companies still operate under one roof and in one or another situation are still being managed by consortium. According to the new organisational structure, the majority of functional subdivisions went under authority of JSK "MFC". But since the ability of newly established companies were too weak for autonomy, JSK "MFC" concluded a treaty with them according to which all of the companies got the possibility to use it administrative services and material and technical provision. Now, the following departments of JSK "MFC" are open for the members of consortium:

- Department of the fleet exploitation
- Oil department
- Service of the Chief Capitan
- Technical service
- Department of labour protection and safety measures
- Service for material and technical provision
- Personnel department

All these departments are of the main importance for any fishing company and it's relevant to say that without them it's almost impossible to run large-scale fishery. For example, Department for the fleet exploitation secures the effective operation of Russian fishing vessels in accordance with production plan. Oil department organize supply for vessels with fuel and combustive-lubricating materials in own ports and in the open-sea. The Chief Capitan department organise navigator services in accordance with International laws and conventions. Technical service makes sure that all vessels have been received necessary technical maintenance and was equipped in accordance with their needs and requirements.

This allowed to use the main funds and personnel more effectively and as a result gave the possibility to the daughter companies to stand on their own feet. Working on the united quota, the companies not only coordinated their activity but made efforts for the benefit of the head enterprise - JSK "MFC".

It is interesting to investigate how MFC is managed, i.e. whether becoming a joint-stock company and going through structural changes made any difference.

*"The level of insider ownership and insider representation on the board of directors have become routine question when analyzing Russian enterprise behaviour because it is assumed that domination by insiders tends to preserve the pre-privatisation status quo within the enterprise"(Hendley 1998).*

The structure of Consortium has been continually dominated by insiders and the corporate form of Closed Join-stock Company established for majority of members of consortium shows MTF commitment to insider control. Like the most of Russian enterprises "MFC" had a tradition of one-man management.

During Soviet area orders made by the general director had to be fulfilled without any objections. Though it has to be understood that freedom of the general director was limited by the ministry and Soviet government and all his actions had be done in accordance with plan fulfilment. During the last few years the significant changes took place. Since the new organisational structure was introduced the director started to be accountable for the board and shareholders. 30% of stock was registered on the name of foreign owner and 50% still belong to the single owner on the Russian side (See figure 8).

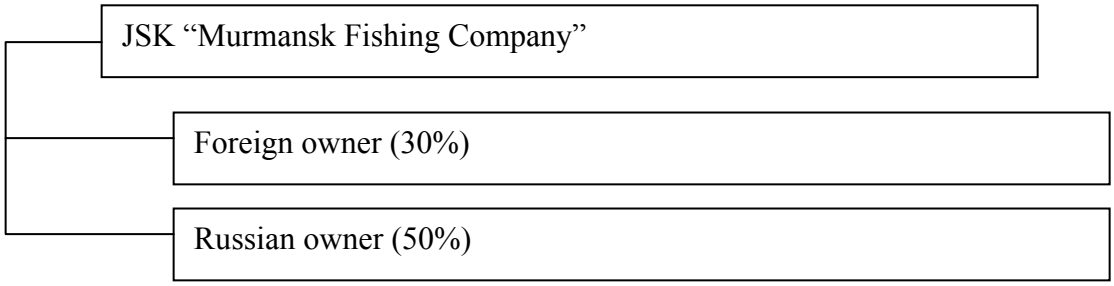


Figure8. The top of owners.

Last year, when the new quota allocation system was introduced, the top management made a decision to move headquarters from Murmansk to Moscow. In their opinion it seems easier to draw to the company so necessary quota by being closer to the centre of quota allocation.

### 4.3 Relationship with government

After privatization all stock was divided between companies' workers and management.
Although the state holds no stock in "MFC", the tradition of close cooperation with government persists to some extent.

During Soviet times, MFC, like many other large enterprises fulfilled many state functions. MFC was responsible for housing, building of schools and educational institutions, providing help for hospitals and many other social functions. When the Soviet regime collapsed the company didn't transfer all those functions to the government and continued to carry on the majority of them. For example, free of charge fish production is still being delivered to the veterans of Murmansk region, kindergartens, Murmansk military units, Murmansk Oceanarium, monasteries. The company renders financial support for the city sports organizations. MFC also engaged into the governmental program "Cheap fish" (Andreeva 2003: 3), supplying the not well to do part of Murmansk population with fish production at low prices. When questioned as to why they continue to run these activities they answer that it creates them a positive image in the eyes of government and help to get necessary fishing quota.

Being responsible for quota allocation, government withdrew from active participation in fishery sector. Support from the state for the fleet modernization as well as subsidies were stopped. Now companies have to survive on their own (Bobylov 2004: 10). From the accounting documentation it can be proved that "MFC" don't get any kind of state subsides or other kinds of financial loans anymore and absolutely capable to survive independently. But the relationship with Moscow is still on agenda and has its up and downs.

### 4.4 The structure of the Fleet

The major industrial force of the company is the fishing trawlers. All vessels within consortium have been sold from "Murmansk Fishing Company" to other enterprises during the reconstruction period under hire purchase agreements. Now, there are 59 fishing trawlers and 3 units of servicing fleet at the fleet's disposal. The fleet works in different parts of World Ocean, and catches the following species of fish: catfish,

flounder, grenadier, capelin, tub fish, redfish, halibut, haddock, polar cod, blue whiting, saithe, sardine, sardine, short-bodied sardine, Pacific sardine, Atlantic herring, mackerel, jack mackerel, cod, hake[14].

In the middle of 1980-s JSK "MFC" carried on the fishery both on the northern seas and in the south-western Atlantics and the Pacific Ocean (See figure 9).

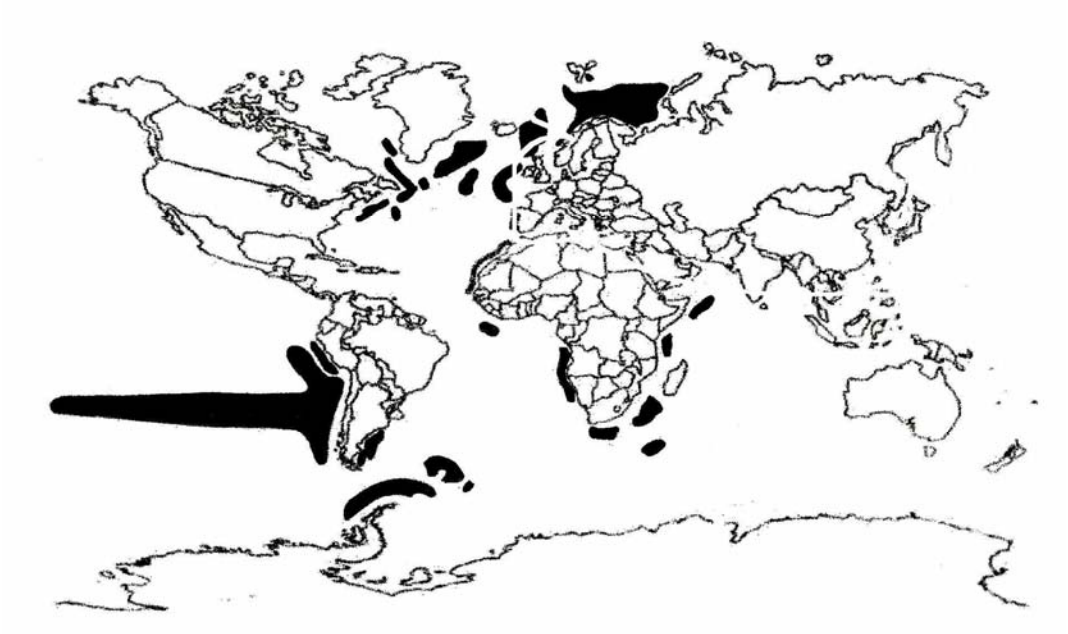

Figure9. The geographical change of the fishing fields of "MFC" fishing fleet. The main fishing grounds before the year 1992[15].

Since the abolition of Soviet Union and planned system, "MFC" faced the same problems as many other Russian northwest fishing enterprises: left by its own, without any support from the government and regional authorities, company couldn't keep on long-distant fishery due to increased price for fuel and had to reconsider its activity. Hence, it was necessary to return the vessels from the distant fishing regions.

[14] Information is taken from the company's leaflet issued in 2002.
[15]Source: Kisseleva 2003

Now the majority of the fleet is operating at Barents and Norwegian Seas, Spitsbergen, Jan- Mayen, Eastern Greenland, Faeroerne, Reikjanis and some open parts of the ocean beyond the area of foreign states (See figure 10).

Figure10. The geographical change of the fishing fields of "MFC" fishing fleet. The main fishing grounds during the year 1992-2005[16].

In the 1990-s a significant part of the fleet were written off because there were no means for their modernization and management of the company faced the problem how to use all possible resources to keep production alive

In 2000 the financial situation had been improved to some extent by the shift of the part of the trawlers from the Barents Sea to the Atlantics and increase of export of cod and other species of white fish up to 80% of the fish production value.

[16] Source: Kisseleva 2003

According to German Gref[17]: "Russia builds economy without facility, and it's up to fleet owners where to find resources for fleet maintenance and modernization" (Romanov 2001: 9).

Due to deficit of bio-resources MFC started to use only highly efficient vessels. But the question ought to be asked is why company kept low efficient fleet? The answer is simple-the quotas allocated to companies were as well allocated for this part of the fleet too. This in its turn gave company a possibility to get rather high volumes of catch (Fish Capital N 31/2003: 3).

However, it was paid a lot of attention to the modernization and technical re-equipment of fishing fleet under the BBC-contracts. The company determined it's priorities as modernization of already existing vessels and not as an expensive investment into the building of new fleet, neither with help of western capital nor with own resources.

For example, some years ago Murmansk Fishing Company took a 140 millions of American dollars credit to built 6 trawls at the dockyards in Germany. Vessels were built and are operating but the credit still not paid and the issue remains unsolved. Thus, it was planned that 12 company trawlers of "Moonzund" type will be reconstructed. As a result, newly modernized vessels would be able to catch three-times more fish than they used to do. According to the president of JSK"MFC" new "Moonzund" trawls would be self-repaying and can produce fish of higher quality which will be up to the world-standards.

[17]German Gref was appointed minister of economic development and trade of Russian Federation in 2000. Ministry of economic development and trade was established in accordance with presidential decree of new structure of federal bodies and received raw of functions from abolished Ministry of trade, Ministry of economics, Ministry on CIS and State committee on North affairs.

This new policy of "Murmansk Fishing Company" results from the new principle proclaimed by the company's management that it shouldn't be a difference in quality between fish going for export and fish supplying to domestic market.

Super-trawler MA-1823 "Vasily Losovsky" was the pioneer of the new engineering and technology. Three more vessels: Ma-1831 "Kapitan Bogomolov", MA-1807 "Admiral Shabalin"and MA-1808 "Alexander Mironenko" were then reconstructed in a similar way. Four other fishing vessels are now reconstructed as well and working in the transport variant.

Adverting to numbers, it can be observed that the foreign part in the company's volume of fleet modernization and repair increased dramatically from 34% in 1997 to 67% in 2002 (See figure 11).

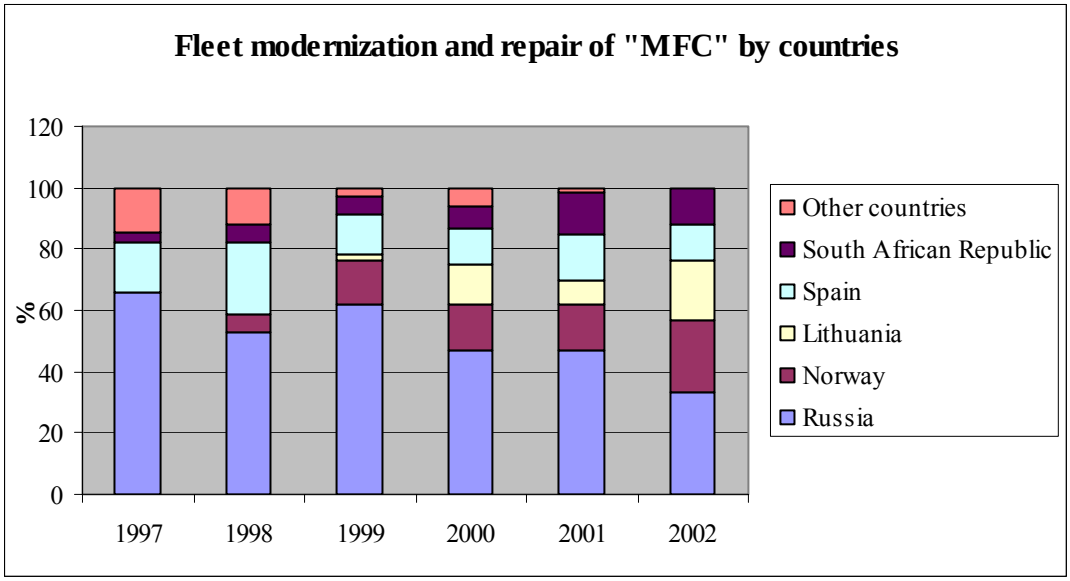


Figure11. Fleet modernization and repair of "MFC" by countries[18].

[18] Source: Own compilation based on the data provided on request by JSK "MFC".

The reason why the company shifted their orientation towards foreign markets is a rather simple: It is easier to operate with finances abroad and, as a rule, not from the own account but from account of western partner. All necessary components can be bought without tall registration as well as repair works can be done without father documentation (Zuev 2002: 16).

Now, the fishing capacity of JSK "MFC" represented by the following group of vessels:

| Type of the vessel | Number |
|---|---|
| Super-trawler "Moonzund" | 11 |
| Super-trawlers of "Horizon" | 6 |
| Medium Freezer trawler project 2198 | 6 |
| Medium Freezer trawler "Barents sea" | 17 |
| Medium stern Freezer trawler | 13 |
| Large freezer trawler "Grumant" | 2 |
| Large freezer trawler "Kronstadt" project 394 AM | 2 |

Table4. The basic groups of vessels of Murmansk Fishing Company[19]

During the last years, the major change occurred in the structure of fishing fleet is the tremendous shift towards freezing or fabric trawlers. The big companies as JSK "MFC" are one of the first recognized the benefits of restructuring own vessels and gaining the flexibility in terms of landings. That is why in first place, Russian shipping companies participating in BBC-contracts tried to get access over the freezing and fabric trawlers. Now, when they are reequipped with freezing capacities and not bound to Norwegian ports anymore, they changed the geographical pattern of white fish delivery and started to land fish to the more distant ports than Norwegian ones.

[19] The information has been provided by the department of Fleet exploitation of the JSK "Murmansk Fishing Company".

### 4.5 Rethinking the production profile and change of the trade pattern

Annual catch of the fleet is 225 thousands tons of fish, from which 190 thousands tons of different fish production for the sum of 110, 9 millions USD is manufactured. In amounts of common deliveries 27,5% of production are exported to the near and the distant foreign countries such as, Great Britain, Iceland, Spain, Canada, China, Norway, Portugal, Southern Korea and Japan, and 72,5% is being sold to the market of Russia. The general director of "Murmansk Fishing Company" said in his interview to the "Fish Capital":" *The large part of the pelagic catch goes to Murmansk and we already have signed agreements with 13 regional fish-processing enterprises and successfully supply them with our production. I feel really disappointed listening all of the time to the complaints about the reductions in supply to the Murmansk market. "Murmansk Fishing Company" almost 80% of its pelagic catch delivers to the own region and if part of the catch is bought by other regions, it's just the question of competitiveness of firms*" (Fish Capital 18/2003: 2).

However the matter with white fish supplies stands completely different. It will be observed that within 72, 5% of catch which is delivered to the home market the large amount of fish represented by pelagic species and other species of the relatively "cheap fish". The lion share of valuable white fish which is in a high demand on the world-market goes mainly abroad. White fish supplied to Murmansk comes as a rule from the coastal fishery and are not of the top quality.

Nowadays, due to several reasons, it is not profitable to deliver white fish to domestic market and MFC, as many other regional companies, in a full accordance with constitution of Russian Federation, stream fish to the foreign ports. Domestic market for white fish is not quite developed yet due to high retail prices and low purchasing capacity of population. However, as incomes of Russian population grows, it can be

an option to stream some reasonable part of white fish to the own market with a time (Romanov 2001: 9).

Murmansk Fishing Company was one of the first Russian fishery companies to provide it's on board fish processing factories with official approved numbers. The trawls-fabric produces on board different kind of products such as frozen fish, salted fish, canned fish (cod liver), cod fillet, cod liver oil and fish meal (See figure 12 and Table 5).


Figure12. The main fish products produced by JSK "MFC" (from left: Frozen fish, canned fish, cod-liver oil, fish meal).

| Forms of processing | Description |
|---|---|
| Fresh | Headed, gutted and iced fish |
| Frozen | Common form for industrial catches |
| Clip fish and salted fish | traditional types of fish, oriented on specific markets as Spain and Portugal |
| Canned fish | A common form for many pelagic species or cod lever |

Table5. Production structure of "MFC", according to form of fish processing

These on board facilities supply products to many European Union countries. Production is accompanied by a number of official certificates, guaranteeing that it

conforms to health rules laid down in EC directives, national standards and regulations (Zajvoronok 2000: 48,49).

On the domestic market company supplies as a rule, canned fish, fish meal, cod-liver oil and some of the chilled fish, which go to the local fish processing fabrics. Now, than a lot of efforts had been put into modernization of fleet and it reconstruction, it must to be said, that processing is a critical point on where and on what price fish should be delivered. Clearly, a variety of benefits were obtained by the Murmansk fishing company when they shifted their processing strategy from fresh fish production to the frozen one (See figure 13).

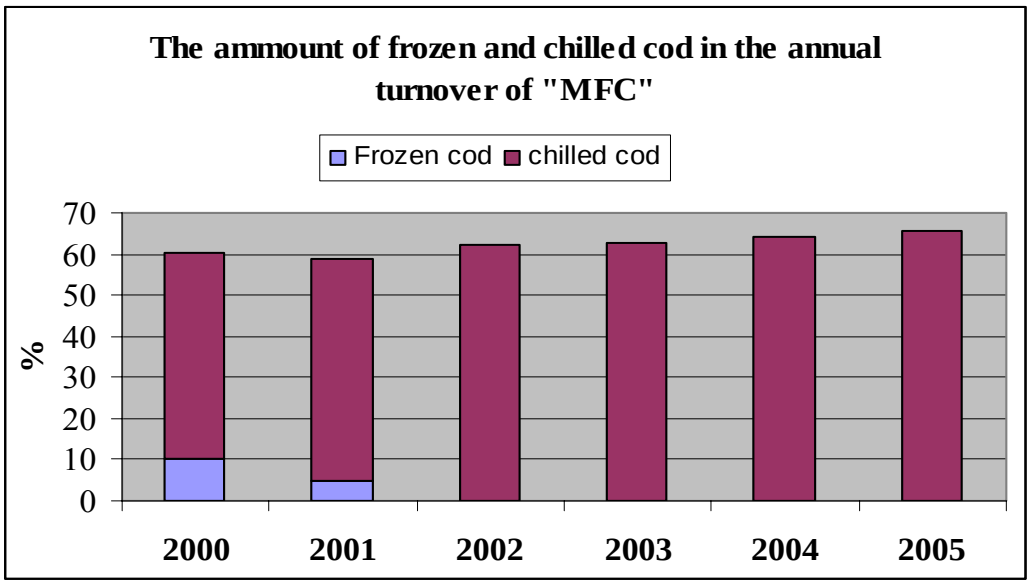


Figure13. The amount of frozen and chilled cod in the annual turnover[20] of JSK "MFC"[21].

[20] Turnover=cost of all fish, seafood and fish products sold by the company within a year.

[21] Source: Own compilation based on the data provided on request by JSK "MFC". Turnover for JSK "MFC" were found as an arithmetical mean from all companies combined into Consortium: MFC-1, MFC-2, MFC-3, MFC-4, and MRFF.

At the first place, shift in processing strategy towards processing of frozen fish gave company more flexibility in terms of deliveries and determined the new trade pattern for white fish.

If after the abolition of the Soviet Union the company's trade with white fish was characterized by the fresh cod deliveries to Norwegian ports, than nowadays due to fleet re-equipment with freezing capacities and shift in production strategy towards frozen fish, MFC started to direct part of it catches to the other than Norway countries as UK, Netherlands, Canada and China (See figure 14).

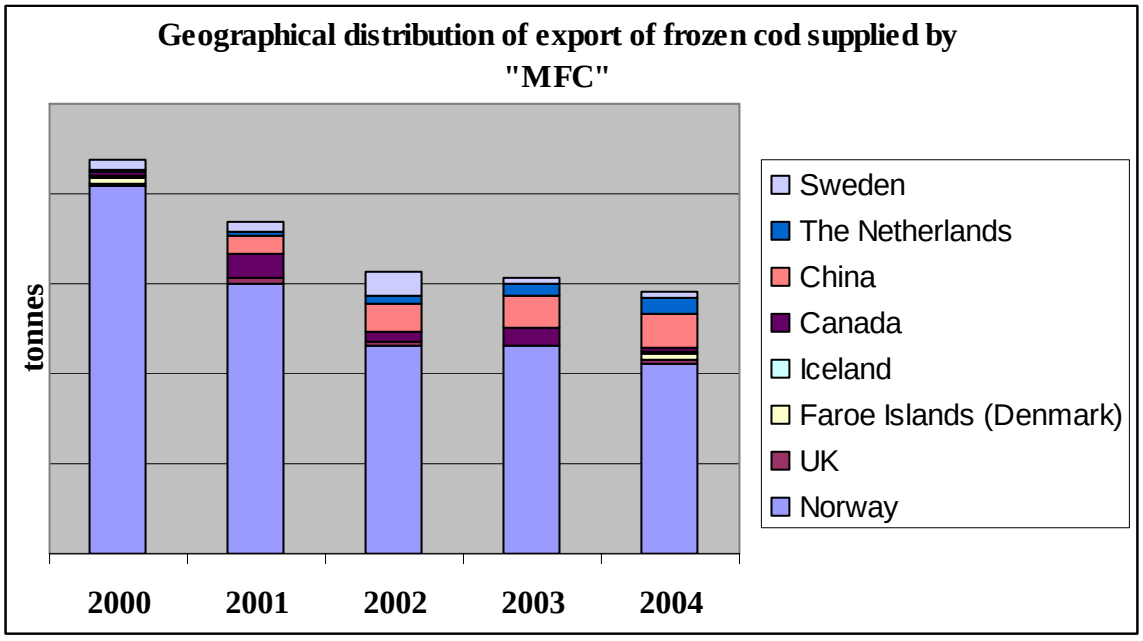


Figure14. Geographical distribution of export of frozen cod supplied by "MFC"[22].

[22] Source: Own compilation based on the data provided on request by JSK "MFC". In order to show the bigger picture all data from "MFC-1", "MFC-2", "MFC", "MGF" were merged into one table and calculated together.

According to management of JSK "MFC", one of the main reasons why "MFC" shifted its production strategy and started to stream its catches of cod and other species of white fish to other countries than Norway is price. At the end of XX century prices for cod started to grow dramatically and made this fish on of the most valuable and expensive on the global market.

However, if we refer to data and compare the price per one tonne of frozen cod paid to the company by different countries, we would see that price variation for cod according to international markets is not that significant as has been proclaimed by the company's management (See figure 14).

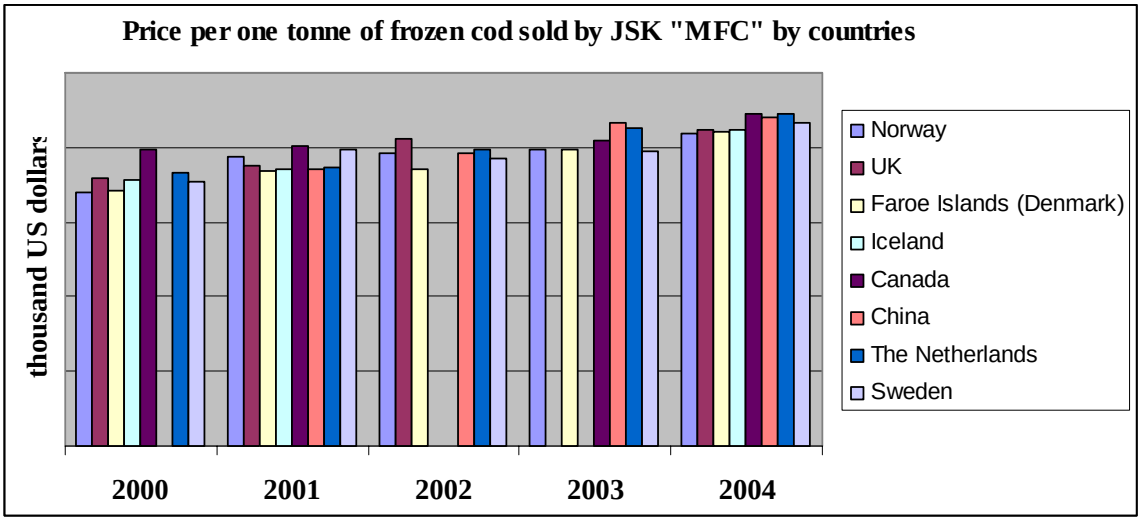


Figure15. Price per one tonne of frozen cod sold by JSK "MFC" by countries[23]

As it can be seen from the Figure 15, Scandinavian countries, and Norway in particular, pay almost the same price for cod as many other countries.

[23] Source: Own compilation based on the data provided on request by JSK "MFC".

Thus, the main objective of this case-study research is to find out, weather the price for cod is a major explanatory factor for tremendous shift in Russian white fish deliveries or there are other driving forces which led to this strategic change.

The main investigation is being carried out within Chapters 5 and 6, where the whole process of north-west Russian fishery adjustment to the new principles of market-based economy is being described and the main driving forces which influence the strategic decision making in the industry and shifted the trade pattern for cod and other species of white fish are identified.

# Chapter 5: Systems Change and the Adaptation of the Russian North-West fishing industry during the years 1992-2000

After the break-up of Soviet Union the north-west Russian fishery has been through the dramatic process of changes. For the fishing companies it has been a long transition period from the planned- to the completely new marked-based economy. As it was proposed by Nilssen (2005), this period can be divided into the three main phases which capture the most prominent changes and trends in the development of north-west Russian fishing enterprises and can be described as following:

1 Passive adjustment (1992-1995)
2 Formal binding and adjustment to regulative aspects (1996-2000)
3 Economic rational adjustment (2001- and up to the present moment)[24]

In this chapter I would focus on the first two phases of Russian north-west fishery development in transition and discuss what factors and to which extend did affect and determine the trade pattern for cod and other species of white fish in the Murmansk, and how the adjustment to the new marked system has influenced the shift in trade pattern for cod in Barents Sea.

[24] This model was proposed by Nilssen (2005) and applied on entire Russian North-West Fishery.

### 5.1 Passive adjustment (1992-1995)

During this period Russian fishing companies were set in front of completely new and unfamiliar situation, when the new market economy was introduced. The old, planned system wasn't working anymore and in the absence of government support fishing companies had to find own resources in order to survive. What actually had happened was that fishing companies concentrated their strategy on the most valuable and best paid species of fish, like cod or other species of white fish. The main product they were delivering was fresh cod packed in boxes. Adjustment was partly a function of demand from Norwegian fish buyers on the one side and vessel structure on another. When it comes to the choice of buyers and ports of delivery there were two main criteria significant for Russian fishing companies: closeness of customer to the fishing grounds and convenient terms of payment. Consequently, northern parts of Norway as Finnmark and Troms were the most convenient places for Russians white fish deliveries. Immediate payment and hard western currency appeared to be the driving force which tied Russian raw fish suppliers to the Norwegian ports. Moreover, the payment they were getting in western currency wasn't the subject of taxation in Russian system, what was another strong incentive to deliver to West and Norway in particular. The third argument which was also very important on this stage was the lack of knowledge in trade and marketing. In general, Russian fishing companies didn't know western actors at all and had no clue how to get in touch with new potential customers. Solution to this was in choosing the buyers they already had been in contact with.

At the same time, Russian fishers got the recommendations from the fish buyers alongside Norwegian coast according to the price differentiation in fish quality. These new requirements were met rapidly by the Russian operators, where the old Soviet volume-oriented strategy was replaced by the strong focus on western quality standards (Zants 2000: 58, 59).

The passive adjustment is a natural reaction of Russian fishing companies focused on a kind of surviving strategy when they were exposed by dramatic changes in economic environment and lacked the tactic knowledge of how to run the business in this new and unusual conditions. The another aspect which should be mentioned is that Russian transition economy was colored by the persons which were sitting in a favourable position (Red Directors) and took an ownership and formal control over the fishing companies (Kuznetcova 2004).

The background for this was an expectation concerning ownership of prospective profitable company in the profitable industry. Expectation of an economic reward is not a new phenomenon for Russian managers. On the contrary, it was one of the strongest controlling mechanisms in the Soviet plan system to achieve desirable behaviour on the enterprise level. Besides, it's also a prominent feature in western management philosophy (Nilssen 2005). The new management of fishing industry have moved from the position of being director on behalf of Plan system to the position of being both employer and manager, who have established a clear connection between real output (performance) and reward: The more effective economic drift, the bigger economic reward to the owner or the manager.

Since, Russian managers at this point of time lacked knowledge how to drive business within basic market economic framework-at the same time as those economic frameworks were not stable or even exist, were measurements in the most cases focused on the simple solution which gave maximum economic pay off (Tobolev 2003: 102). By implication it also gives an understanding that western currency paid to the western bank account in so-called "tax paradises" were much safer and less expensive than alternative solutions. Predominantly, the existing fleet was used in a fishery, even though only a smaller part of the total fleet numbering 450 vessels was particularly suitable for cod fishing in the Barents Sea. In the first phase of transition from Soviet to post Soviet Russia, cod fishing can also be represented as the last

economic resort for the north-west fishing companies. The main strategy was to focus on high valuable fish as cod, with father deliveries to the west European buyers, in practice freshly frozen fish to Norwegian harbours. A part of frozen cod was also delivered from Russian freezing trawlers, which was built in a sight of cod fishery (Levanov 2000: 18, 19).

It's resulted in a clear passive adjustment where Russian fisheries took some necessaries changes in the delivery pattern in order to survive – without any investments into new trawlers or renovation of existing fishing fleet.

## 5.2 Formal binding and adjustment to regulative aspects (1996-2000)

What characterize this period is that a pattern of deliveries was changed along two dimensions. The first dimension is attached to product but another one concerns the destinations of fish deliveries. When it comes to the product form we can see reduction in deliveries of fresh iced fish as well as significant increase of frozen fish products. The most important explanation why this change in product form from the fresh to frozen fish occurred is that Russian fishing companies decided to renovate existing fleet and especially freezers and fillet trawlers. This decision was followed up by two possibilities whether to renovate existing fleet or rent new (used) fishing boats from western partners via leasing contracts (Kalikina 2003: 50,51) .

### 5.2.1 Russian North-West Fleet renovation and financial binding

If we try to study this phenomenon in retrospective we can see that in practice during last few years it was a huge change in the structure of North West Russian fleet. This change was also the result of deliberate aiming and strategic choice amongst Russian fishing companies, when the majority of boats fishing for cod in the Barents Sea where radically renovated into trawl fabrics or freezers. On a few of them a special

system for production of salt fish was also installed. Another solution which many of fishing companies chose was to buy vessels from west (Zacarnaya 2004: 18, 19).

Those vessels were as a rule already used, but some of the companies bought brand new vessels under specific requirements as leasing agreements. That kind of leasing agreements was a specially adjusted variant of bareboat charter contracts, where the leaser had to pay off purchased vessels during leasing period (Kalikina 2003: 50, 51). In a rough term, these arrangements are the results of adjustments between Russian buyers, who lacked own capital, reasonable schemes of financing and property security during pay off period and western sellers of fishing vessels. The main purpose of those agreements is to secure that both partner's interests meet in one or another way (Kudrin 2000: 14). As the practice shows, leasing contracts was also functioning as financing packages attached to the purchasing of fishing vessels as the necessity to make trade possible. For example, another significant aspect of these contracts is that they include the clause of fish delivery stirring. So while Russian fishing companies concluded those agreements mainly to renew fishing fleet (Moskovenko 2003: 3, 4), Norwegian and other western actors had completely different motives. From western side it was two major motives for establishment of leasing agreements. The first and the most prominent motive was that Norwegian fish producing companies wanted to secure themselves a bigger row fish base by directing fish stream form Russian fishers to Norwegian harbours. Consequently a huge part of cod and other valuable species of white fish became an important source of raw fish material for Northern Norway and Finnmark in particular (Nilssen 2005). The another motive which came into force a little bit later during this phase was the wish of ship owners to sell surplus capacities of boats they had.

Common for all BBC-contracts became a condition when white fish started to land to western countries and not to Russia any more (Kalikina 2003: 52).

From 1996 to 2000 the number of vessels working under BBC-contracted increased from 10 to more than 50, where around 30 boats was financed by Norwegian side (Nilssen 2005).
Normally a big part of white fish was landed in home countries of western partners, where it was taken under control with transaction and cash flow. Thus the formal binding on where fish should be delivered, was set up and the greatest part of catch started to be delivered at Norwegian harbours. With this Norwegian fishing actors secured themselves substantial deliveries of row cod to own market via BBC-contracts. It was a part of securing strategy for the western partners which participated in agreements with BBC-contracts (Afonin 2001:6).
In addition to this two major factors related to fleet renovation and financial binding there were a lot of other conditions affected delivery pattern for cod. They can be divided in three main categories: services and infrastructure, terms of regulation and banking system.

### 5.2.2 Services and infrastructure

For Russian fishing companies it wasn't attractive to run additional costs and spend time which can be used in active profitable fishery on something like waiting alongside the quay. The huge spectrum of different regional and governmental control and inspection organizations (up to 14) in Russia made it difficult for fishers to call into own ports. Every of these organizations wanted to be paid for their services before they would give a necessary signed document (Muhina 2002: 18).

From the words of deputy chief technologist at JSK "MFC" the one of the major problems which blocks company's vessels to call to the Murmansk port is the current state system of safety control in the Russian fishing industry.

Currently in the sphere of quality and safety fishing companies and their products are controlled by five different bodies:

1. State Border Veterinary Service
2. Sate Veterinary Service
3. State Sanitary Service
4. State Committee of Russian Federation on standardization and metrology (Gosstandart Of Russia)
5. National Center of Quality and Safety of Fishery Products (National Fish Quality).

All of them have the right to monitor the companies, their fish processing factories, conditions of manufacturing, storing, and transporting. Every control body has its own regional departments and regional laboratories. Laboratories of different control bodies determine the same safety indexes, and each of them does it for its control body. Testing the products is paid for by the owner, usually the producer.
Once the results of the laboratory testing and the assessment of production conditions has been performed, the control bodies issue different certificates, confirming the same thing – safety and quality of a separate lot of seafood products, and different licenses, confirming that the sanitary – hygienic conditions of the fish processing plant of each separate vessel comply with the rules (Muhina 2002: 17, 18).
Issuing of all the certificates and licenses is done by Russian official control bodies and must be paid for by the goods owner.

But it wasn't only a question about amount of money spent but also a question about time consumption. In addition the range and a quality of service offered in Murmansk port was far away from the level that Norwegian side could have offered. For example, availability of freezers and cold storages appeared to be a serious problem. Oppositely on Norwegian side it were new freezing storages which contributed to the

rise of Russian cod landed in Northern Norway from 45% of total catch in 1994 to almost 75% in 2000.

### 5.2.3 Financial (payment) system

It should be also mentioned that when fishing companies decided to sell the catch to the home market, the potential for relatively long delay in payment were big, if only they didn't agreed about prepayment.

Thus, it was more convenient and profitable to sell fish abroad, where payment in western currency was a very important argument since it was representing a relatively stable currency which wasn't an object of taxation in Russian Federation. The reason for this last point was at the majority of fishing companies was getting their payments straight to the account in the countries of convenience such as Cayman Islands, Belize, Cyprus etc. The positive issue about this system is that fishing companies got a possibility to build up own capital and ploughed it back in the form of investments to the fleet development.

### 5.2.4 Terms of regulation

#### 5.2.4.1 Taxes, rates and dues regime

Another important factor which worked strongly against white fish delivery to the Russian ports was related to the regulative aspects in Russia (Frenkel 2000: 14). In the first raw it was a *taxes, rates and dues regime* which ascertained that vessels or boat purchased from the western countries is an object of value-added tax and investment tax which amount to 25% of investment value (Gusenkov 2000: 8, 9).

This tax had to be paid during first call to the Russian port. It concerned not only bare-bout vessels but also those old Russian fishing vessels which had been renovated among others in Norway (Kon'kov, Baranov 2002: 18, 19). As a practice showed these expenses was a rather high for Russian fishing companies and gave them no choice but avoid calling to the own ports (Kudrin 2000: 13,14). The paradox here is that those vessels continued to be allowed to get fishing quotes. Up to 2000 the main criteria for quota allocation was based on the fishing companies catch capacities. It may have looked paradoxical that fishing vessels which were just laid from the western actors got so valuable cod quotes but it was a logical explanation there. The main reason why Russian authorities gave so necessary dispensations and licenses, was at they also were interested in fleet renovation and at that moment, BBC-contracts was the simplest and fastest solution.

However it has worked as strong driving force for both bare boat vessels and renovated ones to deliver fish to the western countries. Analyzing the second phase in the development of North West Russian fishery we can say that it was characterized by prominent inconsistency in the regulative framework. The indicator for this is the missing connection and lack of cooperation between fishery politicians and regional authorities with their intentions to strengthen land based fishing industry and direct fish to the own ports. But as a practice showed they have been working in different directions. One of the measures Russian authorities attempted to take in order to increase landing of fish to the Russian ports, was establishment of a new quota allocation regime (Nilssen 2005).

#### 5.2.4.2 Quota allocation regime

During the Soviet times the quota system was based on the catch capacity and quotas were distributed according to expected catches. The distribution of quotas was carried out by Sevryba, which was subordinated to the Ministry of Fisheries. Fishing

companies had to show they have enough capacity to fulfill allotted quota and have vessels on the disposal they can engage in active fishery (Nilssen, Hønneland, and Ivanova 2002). Coefficients for quota allocation were based on the results of fish catch during three years and were attached to every type of vessel (Zuev 2002: 17).

The new quota system was based on new principles and criteria of quota allocation, where the part of criteria was designed to support companies delivering fish to the home market in favor to export-oriented firms (Zilanov 2002: 7,8).
This system was taken into force from 1997 and it's important to stress that federal authorities took this new regime for quota allocation as a convenient instrument to achieve own goals. An obvious example for such goals can be a rise in employment. The essential point in the new quota system was represented by its division into two parts: technical quota and effective quota (See Table6).

| Technical quota 50 % | Effective quota 50% | | |
|---|---|---|---|
| | Social quota 20% | Stimulation quota 20% | Competition quota 10 % |
| Coincide with today's industrial quota | To those who contribute to creation of working places and other social goods and practically was paying taxes | To those who was fishing other species of fish implied for delivery to the home market | Low-abiding fishing practice |

Table6. New quota allocation system

When it comes to the effective quota, it wasn't practically as simple as illustrated, since for the regional authorities, who supposed to deal with quota allocations and whose decisions was from time to time quite subjective, it was difficult to run high quality evaluation (Evdokimov 2002: 6, 7).
The quota allocation was run two times per year: for the first and the second half-year and was based on the same principle as a technical quota.
For the Russian authorities the main problem was seen in continuation development of white fish deliveries from the newly renovated or purchased vessel, tied to the Northwest Russian companies, to the west, in expense of deliveries to the own market.

From the other side it was quite obvious that ability to maintain substantial changes within institutional framework for industry, in order to change existing pattern without use of enforcement strategy, was quite unlike. One of the strongest measures of enforcement was realized in a more strict practice of quota allocation. At that time one of the main principles for quota allocation consisted in the practice when 50% of total quota could have been taken back if quota seeker had not complied with one of three established criteria (Nilssen 2005).

However with quota reduction and significant changes in fleet composition, the desire of ship owners for more quota coefficients only increased. The solution found was simple. In order to maintain the same amount of quota ship owners invented a very convenient formula: "If vessel is being written off, a quota attached to this vessel remains with the fishing company for the next two years till another vessel would be built or bought". After two years, when the quotas reduced even more, the decision not to take the quotas from "traditional uses" was made in order to prevent Murmansk region from quota reduction. As a result, the amount of vessels decreased from 377 units in 1997 to 346 units in 2002 and amount of quota coefficients still remains after the region (Zuev 2002: 17).

### 5.2.5 Regulative adjustment of North-West fishing companies as a conflict within institutional framework of transition economy

An interesting feature during this period from 1996 to 2000 is the more active adjustment process which fishing companies undertook in order to increased demand from the western market. This adjustment was mainly attached to the vessels with specific technology and production and caused two main conflicts. The first conflict was related to Russian authorities both on regional and central level, who were expecting landings of white fish to go to the home market and not into the opposite direction, and have no possibilities to influence this pattern.

Another conflict was related to the establishment of BBC contracts. Even thought in the begging such contracts looked like favorable arrangements both for Russian and Norwegian side, later on, a significant coordination problems took place.

On the Russian side BBC-contracts were met with a relatively big negative reaction from central and local authorities. One of the reasons was at fishing companies lost their rights over the catch and correspondingly-over the cash flow (Zacarnaya 2004: 18, 19).

One part of the following agreements never even started fishing activity since the necessary quota wasn't obtained or the leasing fee wasn't paid (Afonin 2001: 6).

It should be also mentioned that establishment of BBC-contracts developed a strong change in the structure of existing Russian fishing fleet. During the Soviet times Russian fleet was over weighted with big fishing trawlers which couldn't be used in a cod fishery. They were built with a target to fish after pelagic species. But the big amount of boats which were built exactly for cod fishery in the Barents Sea also existed. These boats were, as a rule, designed for the round freezing or salt fish production. Afterwards focus was switched towards cod fishery, because for the fishing companies it was the most important economical resort. With that showed Russian fishing companies a big interest in western fabric trawls which were smaller and more effective in operation (Nilssen 2005)

All in all it has been approximately 70 fishing vessels which joined Russian fishery in the Barents Sea under BBC contracts or other international agreements. The third part of these vessels were drawn back (35%), 28 % was bought up by the Russian partner and added to the Russian vessel register (Kola Science Centre, 2004). The rest still engaged in the BBC-agreements and amount up to 25 vessels at the end of the year 2004.

According to Nilssen, (Nilssen 2005) during the transition period some of these vessels went bankruptcy, was taken over by Norwegian banks or went out of activity according to other reasons. Thus, on the present moment there are approximately 19 vessels operating under BBC-contracts. Besides these BBC-vessels, there are 80-90 other boats which were renovated, upgraded or modernized abroad and according to heavy taxation and fee regulations never called to the Russian ports (Kon'kov, Baranov 2000:18,19). These are fishing boats-preferably trawls, which are operating in Barents and Northern Seas and engaged in the cod fishery.
All that procedure of fleet renovation caused the major change in the structure of Russian fishing fleet and set the trade pattern of white fish towards western markets. It also should be stated that type of fish produced by Russian fishing companies went through the significant changes and shifted from row cod towards round frozen type produced on board of newly renovated or modernized vessels.

# Chapter 6: Empirical Analysis of Economic rational adjustment of Russian North-West Fishing companies

The third phase is characterized by economic rational adjustment of Russian fishery actors. During this phase, a completely new economic situation was introduced, where the new quota relocation regime took a significant part. Due to the new quota regime a lot of BBC-contracts were terminated at the same time as the demand on white fish row material significantly rose from the western European countries. This situation opened a new perspective for Russian fishermen and gave them an entrance into the new markets.

According to the Region Committee of the State Statistic, from the year 2000 to 2002, it was landed around 100 thousands tonnes of cod from the Russian vessels to Norwegian harbors, which amounted to 75 % of the Russian total quota for cod. Only one third of total Russian quota for cod was landed to the countries other than Norway during year 2001 (See Figure16). Such a high degree of white fish deliveries to Norway during this year can be explained by the biggest amount of registered BBC-contracts attached to the Russian fishing fleet.

Already in 2001 a reduction of cod deliveries can be seen, even though it remained on a quite high level. The major change, which affected the whole 10 years long trade pattern for white fish in North West Russian fishery, occurred during 2003. During this year the amount of cod supplied to Norwegian market was reduced on 33 % in comparison with a year 2000 and amounted to 68, 5 thousands tonnes.

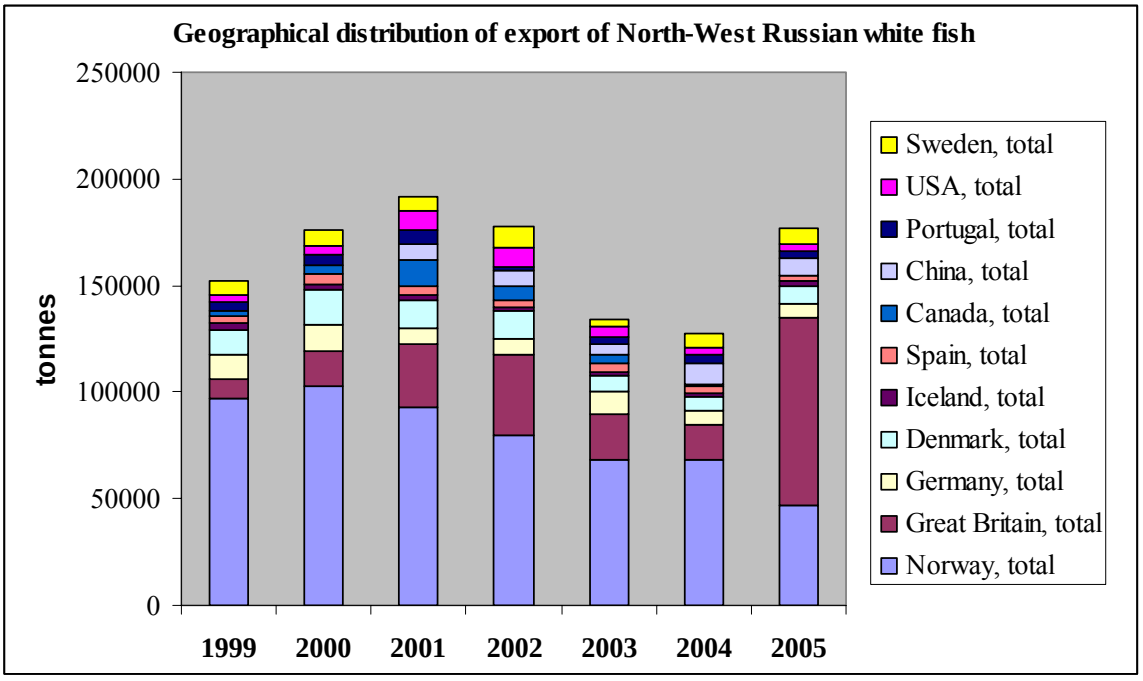


Figure16. Geographical distribution of export of North-West Russian white fish[25].

There are a lot of reasons explaining such a tremendous shift in trade pattern for cod during the last years, but the main of them is that Russian fishing companies became free economic actors and based their activity on a rational economic adjustment.

[25] Source: Own compilation based on the data provided on request by Murmansk Region Committee of the State Statistic. See Appendix 3.

## 6.1 Quota system

### 6.1.1 Auctions: 2001-2003

One of the main factors which had influenced the change in the trade pattern for cod is the introduction of the new quota system. 27 December of 2000 the old industry quota allocation system was replaced by the quota auctions. The new system was based on completely different quota allocation principles and 25 points for auctions regulation were developed.
New system gave Russian authorities the right to run the auctions and centralize this process. The part of fishing quotas which weren't auctioned, were distributed from the Fishing Committee via Production Scientific Council (NPS) to the regional authorities and than to the local fishing companies (Kuznetcova 2003: 2,3).

One of the most important arguments for the introduction of the Auction system was a desire to make the quota allocation process more open and prevent bribery.
However, the new system met a strong critic both from political and industrial actors. The matter was, that the new quota regime in much more higher degree contributed to export oriented activity of Russian fishing companies, while the initial target was to stream fish to the own ports (Gavrilov 2001: 10,11). This situation can be explained by the shortage of financial resources from Russian companies and presence of western capital standing behind, on which cod quota was as a rule actually bought.

Another argument against quota actions was, at this system was driven by price and placed a lot of companies in a difficult and uncomfortable situation. Small local players were struggling to compete against big actors, using western capital and willing to pay more for access to the cod quota (Evenko 2003: 2). At this, during the given period, when the white fish prices on a global market tremendously dropped, Russian fishing companies failed to cover own costs and had to find their way out of

impendent bankruptcy. Even taking into account that almost all catch of cod was sold to western market by western price and job of Russian fishermen was paid according to Russian wages, still it was impossible for the shipping companies to make any profit (Rybnaya Stolica: 2003).

What actually have happened is that some Russian companies which couldn't afford a desirable amount of quota necessary for achieving a profitable drift, started to buy quota as an "open ticket" and rise the amount of fish caught by the own incentive. For example, in the year 2002, the actual potentialities of Murmansk fleet harvesting cod was 4.2 more than standing crop (Schevchenko 2004: 30) and the price for one kg of cod on auction was equal to 30 rubles [26]. In other words, "sky-high" prices for quotas pushed companies to over fishing activities, which at that time seemed to be the only one right strategy for surviving (Zilanov 2002: 8, 9).

With that, among all the reasons for auction criticizing, profit maximizing strategy of Russian fishing companies remained one of the top. The given nature of auctions was working as a perfect economic tool for the short-term profit orientation, when almost all catch of cod was sold to the Western Europe. Firstly, it was convenient due to the fast and secure terms of payment with a hard and stable western currency. Secondly, it was economically favourable since that income wasn't an object of taxation in Russian Federation (Zilanov 2002: 8, 9).
Another major change, caused by the introduction of new quota system was a significant reduction and, in some degree, complete elimination of BBC-contracts. New marketing situation and presence of a new interesting customers all around the world, has weaken the favourable position of Norway.

[26] The **ruble** or **rouble** is the name of the currency of the Russian Federation. 1 NOK is approximately equal to 4, 2 Russian rubles.

From this period, Russian Fishing companies started to develop new markets and supply fish to the countries as Denmark, Canada, United Kingdom, USA, Portugal, and Spain (Korelsky 6/2003: 4,5). So saying, it was a time when the BBC-contracts with Norwegian partners had to be breached and new more favorable contacts had to be established. For example, China, "*with its great potential to buy without asking too many questions*"[27] became one of the most attractive and favourable importers of Russian white fish.

### 6.1.2 New quota regime

After the three years of unsuccessful and destructive politic of the fishery actions, 20 November of 2003 the resolution № 704 "about quotas for extraction of marine bio-resources" was signed and the new system was introduced (Zilanov 2004: 4). This time, the access to the fishing activity was based on a general fixed tax for the resource utilization in accordance with basic species and should be paid after the given price list.

In contrast to actions, new quota allocation system is controlled and run only by central authorities. Quota rights are based on average catch shipping companies had over the last five years and allotted for the same period of five years (Hønneland 2005: 182).
The point here is that new quota allocation principles concern both, those who were getting quotas over the auctions and those who was allotted an industrial and research quotas. These fishing rights are given without any other conditions than payment of resource tax. However, fishing companies have to comply with necessary requirements of fleet size and technical fishing capacity in proportion to quota.

[27] From the words of the head of External Economic department of JSK "MFC".

The tax is legitimated in The Tax Code of Russian Federation and attached to the fixed stake for the basic fish species. It has to be paid in amount of 10 percent of total quota per year in advance, and the rest in back pay. For example, price for cod in the north-west fishery basin total to 5 thousand rubles per tonne.

The new regime is set up in a long-term perspective and has an intention to achieve stability and predictability within fishing industry. Another important reason standing behind the new quota system is a desire to improve the investment situation on the own market. Due to the new system, amount of allotted quota can serve as a necessary security for banks, when they are financing or giving credits to the fishing companies.

In this sense, it can be said that the new principles of quota allocation will open a wide range of favourable opportunities for Russian fishing companies and help them to plan their activity in a more long-term perspective with a secure quota. Such opportunities could be represented by a possibility to take a credit for fleet renovation or building of completely new fishing vessels (Vasilenko 2003: 6).

### 6.2 BBC-contracts

As was discussed before, the introduction of BBC-contracts highly determined the trade pattern for cod of Russian fishing companies and tighten them to deliver catches to Norwegian ports. The reason for this was at almost 60 percent of all contracts were concluded with Norwegian partners. With the introduction of the new quota regime in 2000, this pattern was drastically changed and the white fish supplied by the Russian companies started to stream to other European countries and China and Canada as well. What actually has happened is that Russian shipping companies lost their interest in father development of BBC-contracts or even on maintaining them at the existing level due to the price drop for cod on an international market and high price for quota, which made these contracts unfavourable for Russian side. It is striking to

notice how reduction of BBC-contracts corresponds with reduction of white fish delivery to Norwegian market. The point to be made here is that with decrease of BBC-contracts the formal bindings to Norwegian market was weakened and the new partners as well as new markets were established.

At the other side Russian authorities wanted to stop BBC-contract practice for a long period of time already and made it clear that during the year 2005, vessels operating under such agreements will not be allotted with a cod quota. However, the companies who were already operating under BBC-contracts and couldn't break them due to financial situation could have been given a dispensation till the end of leasing agreements, but on a condition that such contracts would not be renewed (Nilssen 2005).
The purpose of such a respond, as earlier, was revolving around flow-out of Russian fish from the own market. So it was decided on a higher level of Russian administration that elimination of BBC-contracts is a necessary measure and quota have to be allotted only to the vessels which are registered under the Russian flag. But it is interesting to note that elimination of BBC-contracts it's not actually what happened. In reality, they just were transferred into another category of leasing agreements, where fishing boats were registered on the Russian owner this time.

When we are talking about the nowadays Russian fishing fleet, it should be said that it mainly consists of the fishing boats renovated or purchased from West. These vessels are more economically efficient than Old Russian fleet and operate more productively (Gavrilov 2001: 8). The consumption of fuel was one of the most important reasons for the fleet upgrade and establishment of BBC-contracts. The Soviet fishing fleet consisted of large-size vessels and wasn't considered for effective fuel consumption.

To maintain an effective fishing operations by using these types of vessels was completely impossible. Thus, the decision to replace old engines with relatively new ones build at west seemed as a deliberate choice (Muhina 2002: 18).
At the other hand, a lot of Russian vessels were just reequipped with modern fillet production systems or round-freezing capacities, which gave Russian shipping companies a possibility to enter new attractive markets and to offer better quality products.

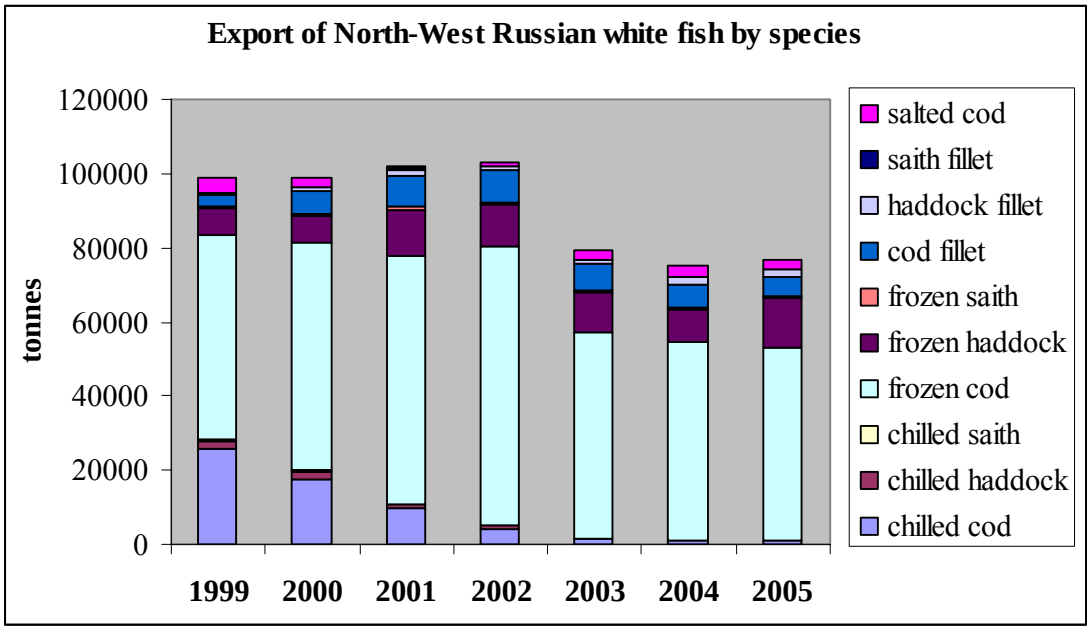


Figure17. Export of North-West Russian white fish by species [28].

At the other side, it is interesting to see how the type of raw fish material supplied by Russian companies has been changed together with a reconstruction of fishing fleet.

[28] Source: Own compilation based on the data provided on request by Murmansk Region Committee of the State Statistic. See Appendix 3.

If during the first phases from 1990-1995 and 1996-2000 the catches landed along Norwegian cost were as a rule represented by the fresh cod, than now, starting from the year 2000, the amount of fresh fish delivering to Norwegian market almost reached the zero level and amounted to 4 thousands tonnes in the year 2004 (See figure 17).

It is a huge difference if we compare this figure to the year 1996, when approximately 100 thousands of fresh cod was landed at the Norwegian harbors.

### 6.3 Costs and price difference

In a modern economies price and costs are the major issues that affect company's activity and decision made in terms of production and supply. Price and costs can't be considered separately. In the global fish market price determines almost everything. The price guides fishing companies in choosing what species to catch, how and to whom to sell it. Costs induce firms to supply more if input prices, as operational and fixed costs, are low.
High input cost make fishing activity less attractive and make some companies to withdraw from operations (Begg 2003).

Up to 2003 the majority of white fish catches were landed directly to Norway, where they were sold to the local customers or delivered to the freezing storages from which they could be transported to the final destinations. But due to the significant changes in prices on a global white fish market, the new alternatives for cod deliveries aroused (See figure 18).

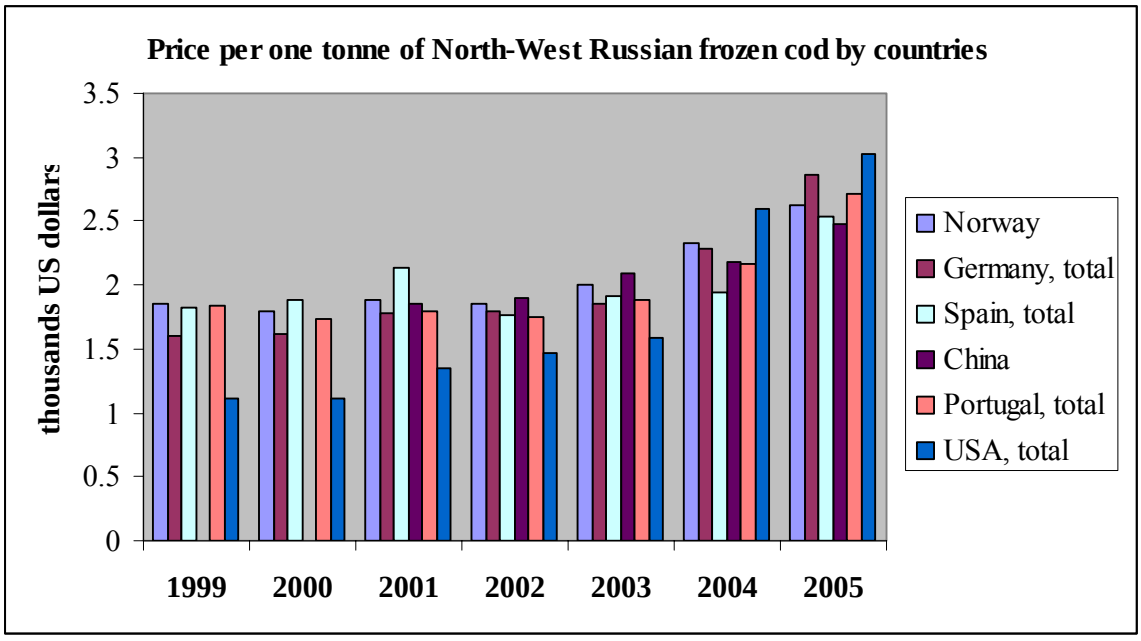


Figure18. Price per one tonne of North-West Russian frozen cod by countries [29].

If during the years 1999-2002 the price range offered by European countries didn't vary a lot and Norway was among the best paying buyers of cod, than in the year 2003, together with the drastic change in the world price for cod, the entire picture of price differentiation have been changed. Now, such countries as USA and Canada are one of the strongest purchasing powers in the world offering the highest price which for example in the year 2005 exceeded an average price paid by Norway almost on 13%. Moreover, in the year 2001 the new player on the global market for white fish was introduced. China became one of the most competitive and best paying buyers of white fish and as it can be seen from the Figure 16, Russian landing of frozen cod to China continues to grow.

[29] Source: Own compilation based on the data provided on request by JSK "MFC".

On the other hand, costs, related to the landing of fish, have been another major factor determined the new destinations of cod deliveries and which can be identified as following:

- Local fees and dues (export and import taxes)
- Costs related to handling at the port of call (usage of freezing capacities)
- Transportation costs (Zirov 2001: 2).

When Russian fishermen started to be knowledgeable players on the global fish market and got an actual possibility to learn more about international trade, they found out how big the difference in cost related to different solutions of delivery actually is. For example, Norway, which used to be the main market for the Russian white fish catches, now is the one of the most cost consuming markets. The taxes to be paid here exceed average taxes and dues established in many other European countries. Usual tax paid to the veterinary inspections in Norway equal to 7.91 USA dollars per 1 tonne, when in UK it amounts only to 2.58 dollar and to 3.15 dollar in Netherlands. But it's not all the difference. In Norway local fees constitute from: the export tax (0.3%), control tax (0, 2% for all fish which is land in Norway), tax to the food inspection if the fish is being imported (2.29%) and Sales tax (0.9 %)[30], when in other European countries half of this taxes and dues are not even exist.

For the Russian fishing companies so extensive Norwegian system of local dues and taxes for fish does not seem favorable. Hence, they chose to stream their catches to the countries with an easier controlling system and more favourable terms of taxation.

[30] Information obtained by Norwegian Raw Fish Organization (www.rafisklaget.no)

When it comes to transportation costs, they vary according to alternatives of delivery. The first alternative is connected to trans-shipment at sea, when the catch is being uploaded from fishing vessel directly to the vessel-transporter on which fish would be delivered directly to customer (Hamaza 2001: 12,13). In spite of the fact that this option seems to be a rather simple and favorable, in reality, a majority of Russian fishing companies, who don't have own transportation fleet find this method a rather pricy and prefer to deliver catches directly to the customer on what they can spare additional 100 000 USA dollars (Zacarnaya 2004: 19).

The second alternative represents direct delivery, when Russian fishing vessel goes straight to the port of agreement and land catch there. The cost level with this type of delivery highly dependant on: size of the vessel, its actual working condition and fuel consumption. Thus, this type of delivery methods can be used only by the relatively new vessels or vessels which have been upgraded with the new engine and machinery.

As it is the case with "MFC", who put significant effort into the fleet renovation, as well as with many others fishing companies operating in North-West Russia, the majority of landings are being delivered via Netherlands. Netherlands, and particularly a place close to Rotterdam, is a main trans-shipment point for many Russian fishing companies, where the majority of freezing storages are being accumulated and the bunker price for fuel is quite reasonable compare for example to Norway.
There are two main sales agreements used by Russian Fishing companies: FOB[31] and DES[32].

[31]FOB-Free on board

[32]DES-Delivered Ex Ship

The reason why FOB agreements are so popular among Russian actors is that they reduce costs needed to be paid during the catch delivery from seller to buyer. FOB selling agreements imply that the fishing companies do not have to pay for transportation of the catch to the port of shipment. Only expences they run is loading costs. The buying campany also pays for insurance, unloading costs and transportation from the port to the final destination. The passing of risks occurs when the catch pass the ship's rail at the port of shipment (Hamaza 2001: 13).

DES agreements are also quite favorable since, selling price includes the cost of the catch, transportation costs and also the cost of marine insurance. The passing of risk does not occur until the ship has arrived at the port of destination, but before the catch have been unloaded.

Now, when demand on the white fish production on a global fish market is really strong and russian fising companies fully aware about this situation and established a close cooperation with interesting partners, it’s easier for them to dictate own rules of the game and sell their catches on better prices and more favorable terms of agreements, which minimize their costs.

# Chapter 7: Discussion and implications

The Institutional change and introduction of the new market economy in Russia in a high degree affected the behaviour and performance of north-west fishing companies and gave them a possibility to learn the rules of the world fish trade. But even though, the new market-based system was introduced in the country it is still not functioning properly and can be described as a transitional model between planned and market-based economies, which greatly reflect and explains the trade strategies chosen by Russian north-west fishing companies.

The results of this work revealed a strong support for hypothesizes which have been made initially in the begging of the study and proved that increased prices for white fish on the global market accompanied with introduction of fish auctions, BBC-agreements and existing legislative system, changed the trade pattern for cod and other species of white fish in the Murmansk Region. Nowadays, Russian north-west fishing companies started to stream their catches to other than Norway countries in order to minimize their costs and improve profitability. Given behaviour can be described as a rational economic adjustment to the new market situation, when companies have to change their marketing strategy in order to survive. But the question ought to be asked is: "Was this rational economic adjustment favourable both for the companies and for the Murmansk region"?

## 7.1 New marketing strategy

Marketing is a crucial activity in the fishery. In a commercial context, a good catch is only of benefit if it can be sold on a reasonable price. Correct marketing strategy can make a significant difference for the fishing companies and create a sufficient level of profit. Hence, these efforts, which are taken in improving marketing strategy and

distribution, as usually, plays an important role in economic development of fishing organizations. (Charles A.T.: 2000).

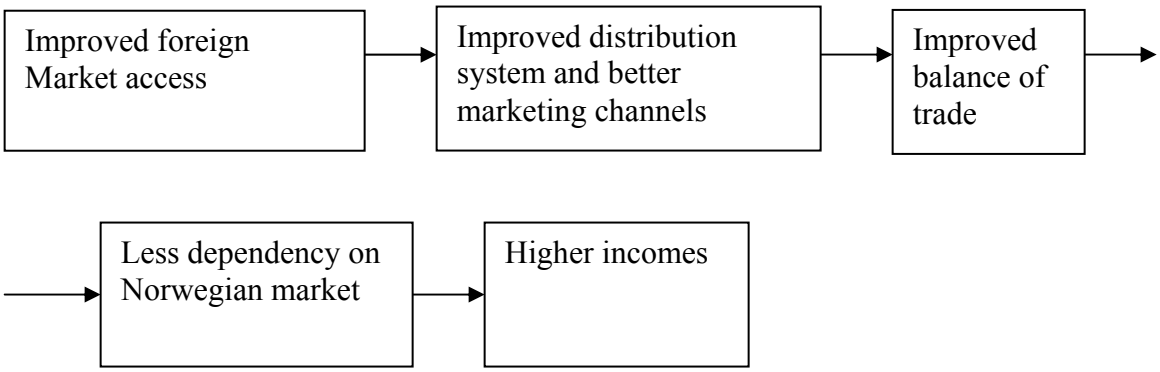


Figure19. The positive aspects of change of the trade pattern for cod

The trade benefits, which Russian north-west fishery gained with the recent change of their marketing strategy and switch in the trade pattern for cod towards other than Norway markets, can be demonstrated on the figure above. Now, when fishing companies aren't bind to deliver all catches under BBC agreements to Norwegian fish processing industry, they have more improved market access and can choose themselves, to which market to deliver catches of white fish and what distribution system to use. All these factors lead to the raise in profit and unable companies to generate necessary resources which they can reinvest into own activity. However it is quite difficult to illustrate successfulness of Russian fishing companies according to financial results.

### 7.2 Profitability

The core problem is hidden in new market-driven accounting policy. Since the break-up of Soviet Union and replacing the socialism with new economic and politic

systems, the accounting policy has also been changed. Now, companies are paying taxes according to the amount of profit they've got during the following year.

This situation gives fishing organizations the unlimited possibilities to avoid taxation and maximize their profit, by minimizing it on paper  This means that nowadays almost every organization have two or more accounting documentations, where "the black books" reflect the actual financial and operating activity of the enterprises.

In Fishery, as in many others industries profit is a part of product price and can be defined as a difference between turnover[31] and operating expenses. Correspondingly, the most used way of reducing the taxes is minimization of profit by increasing cost of sales and making them equal to turnover (Volodina 2002).

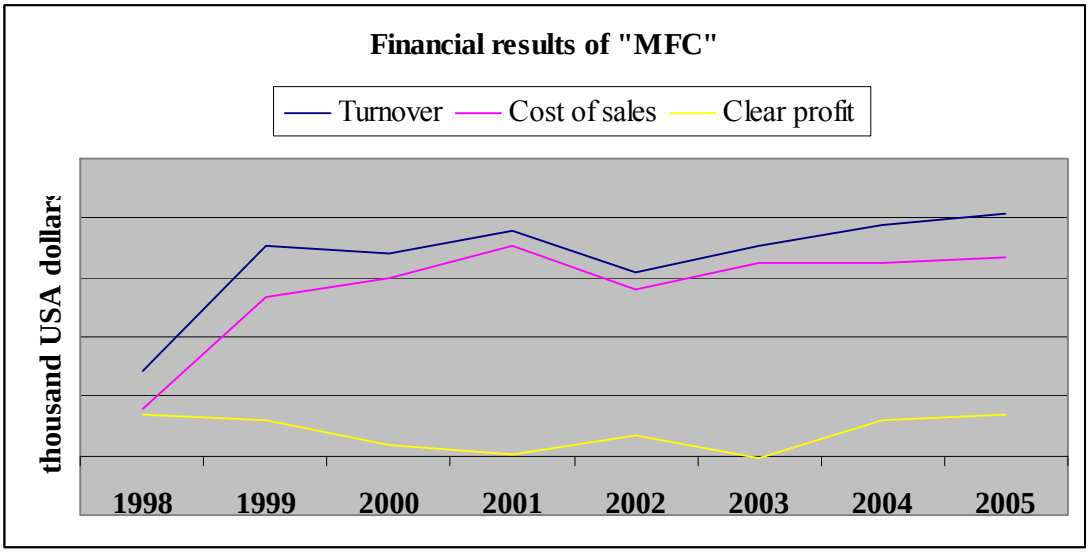


Figure20. Financial results of "MFC"[32].

[31]Turnover represents net invoiced sales of goods, excluding value added tax.

[32] Source: Own compilation based on the data provided on request by JSK "MFC".

The Figure20 was built according to financial results of entire JSK "MFC" and illustrates this principle. However, not taking into account all the difficulties concerning financial assessment of Russian fishing companies, it is obvious that from the year 2003 the financial results actually improved and the amount of generated profit started to grow (See figure 20).

Based on these results, it can be stated that due to the change of the trade pattern for cod and other species of white fish, fishing companies of Murmansk region managed to adjust to the new institutional framework of market-based economy and find the ways to reduce their costs and increase profits.

But can we apply the same successful outcome to the state of the regional economy and say that the recent change in the trade pattern for cod and other species of white fish contributed to the regional budget?
With an introduction of the new quota allocation system, traditional fishing companies got a secure and necessary quota but still don't carry any kind of responsibility besides tax payments. (Zuev 2002: 16, 17). Almost all of the catches of white fish in the Murmansk region are being sold beyond customs-enforcement area what allows companies to increase profit by not paying taxes.

According to the Murmansk Statistical Committee tax proceeds in 2001 were equal to 25 million of US dollars, when in 2003 it amounted only to 16, 4 million dollars. Consequently, for two years, taxes paid to the regional budget decreased on 35% (Zuev 2003: 22).

In this situation Murmansk Region didn't benefit from the new situation and actually lost a lot of money which supposed to go to the regional budget and afterwards to be redistributed in favor of regional needs (Chichelnickiy 2000: 14, 15).

## 7.3 Implications

Such a tremendous change of fishing industry which was undertaken in Russia the World Fishery has never known. However, Journalistic sensations about dying of domestic fishery are far than exaggerated. Enterprising and hard working Russian fishermen have learned strategic management, marketing and "pure competition" in practice. In spite of the crisis Russia managed to keep the part of national treasure: human, natural and scientific capital (Gavrilov, Romanov 2001: 8, 9, 11).

Today, the main focus both of regional and central authorities is being concentrated on the development of domestic fish processing industry, where the increase of white fish deliveries to the own ports is the target number one (Zilanov 2001: 3, 4). However, Russian fishermen don't have serious reasons to change anything in their trade pattern for cod and other species of white fish in favour of domestic market, since the amount of quota they get from government doesn't depend on where the white fish goes.

To change the trade pattern for cod again and turn Russian fishing vessels into the own ports is a difficult task, but possible. Partly this situation can be changed by reconsideration of customs policy and regulative system. But the key solution to this problem only can be found in the radical change of quota allocation, since there is no stronger incentive which can influence decisions taken by ship owners than allocation of bio-resources. Consequently, the systems which can connect fishing companies with own shore must be created (Bobylov 2002: 32, 33).

At the other side, it is important to understand that domestic market should be filled up by expensive white fish products insensibly, little by little and no sooner than population is ready to purchase this production. Fishing companies should turn to the

home market due to the own initiative and not because of administrative enforcement and pressure.

Another reason why it is not sufficient to force fishermen to deliver catches to Russian ports is the current state of the market, when on the western market prices for the white fish are minimum twice times bigger than on the Russian one. Thus, not taking into account how much Russian businessmen would like to deliver white catches to the own ports they can not afford it since the economical state of Russian north-west fishing companies still remains unsteady due to the lack of resources and arbitrariness of administration.

Based on the findings, it can be concluded that government and regional authorities should use given in their hands power not to restrict and pressure companies, but to create favorable institutional environment in which fishing enterprises would not only be able to survive, but to operate effectively and generate reasonable amount of profit which can be streamed both for the own growth and to the regional budget (Bobylov 2001: 15, 16).

Russian fisheries is going through the difficult times, but it will recover if all efforts of fishermen would be supported both by local and federal authorities. Economic reformation must be supplemented with considered governmental regulation. The time of cooperation has come.

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## Appendix 1

### The list of interviews

- Babenkov Sergey: The Senior Inspector of Murmanrybvod;
- Beljaev Georgiy: The Resource Deputy of General Director of JSK "MTF";
- Borisov Ruslan: The First Deputy of the General Director of OOO "MasterFish";
- Borkin Igor: research assistant of Knipovich Polar Research Institute of Marine Fisheries and Oceanography (PINRO);
- Fedotenko Vasiliy: The General Director of ZAO "Murmansk Trawl Fleet-1";
- Kandratjev Anatoliy: The Capitan of Kolkhoz "Severnaya Palmira";
- Kichigin Sergey: Trade delegate of fabrics in Russia;
- Kisselev Sergey: Senior Technologist of JSK "MTF";
- Kokora Alexander: research assistant of Knipovich Polar Research Institute of Marine Fisheries and Oceanography (PINRO);
- Konoplanko Oleg: The General Director of "NordAlkor"
- Lisovskiy Stanislav: The Head of Marine Fisheries Department of Knipovich Polar Research Institute of Marine Fisheries and Oceanography (PINRO);
- Mamchenko Arkadiy : The Senior Technologist of ZAO "Gubernskiy Fleet";
- Mihalchuk Peter: The General Director of OOO "Sevribproekt";
- Mihashin Victor: Capitan of ZAO "MTF-3";
- Mushtaev Vladimir: The Senior Technologist of ZAO "MTF-1";
- Nazarenko Nikolai: The Capitan of JSK "MTF";
- Nedoshivkin Fedor: Entrepreneur (Catch and Sale of cod).

## Appendix 2

### The list of the fishery journals used within a project

- Fishermen News
- Fiskaren
- Fish Industry
- Fish Business
- Fiskeribladet
- Fish Capital
- Fish Resources
- Murmansk Fish Resources

## Appendix 3

## Export of Russian north-west white fish by countries

| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|
| | Thousands of American dollars | | | | | | |
| **Great Britain** | **11071** | **17749** | **35143** | **55555** | **35634** | **37311** | **57364** |
| | | | | | | | |
| Chilled cod | - | 18 | 331 | - | - | - | - |
| Chilled haddock | 3 | 4 | 42 | - | - | - | - |
| Chilled saithe | - | - | - | - | - | - | - |
| Frozen cod | 6705 | 8613 | 13374 | 31805 | 17682 | 20834 | 17448 |
| Frozen haddock | 886 | 988 | 3863 | 3969 | 3182 | 2144 | 3573 |
| Frozen saithe | - | 44 | 48 | 131 | 26 | 127 | 1 |
| cod fillet | 1086 | 4687 | 10886 | 13854 | 8636 | 11451 | 5920 |
| haddock fillet | - | 680 | 1214 | 1135 | 896 | 2303 | 1398 |
| Saithe fillet | - | 28 | 237 | 101 | 25 | - | 8 |
| Salted cod | 190 | - | - | - | - | - | - |
| | | | | | | | |
| **Germany, total** | **21355** | **20509** | **12262** | **12734** | **18204** | **14219** | **18271** |
| | | | | | | | |
| Chilled cod | 4031 | 5705 | 2786 | 885 | - | - | - |
| Chilled haddock | 248 | 528 | 381 | 214 | - | - | - |
| Chilled saithe | 9 | 13 | 15 | 17 | - | - | - |
| Frozen cod | 11889 | 11367 | 6044 | 7899 | 12529 | 8914 | 11935 |
| Frozen haddock | 854 | 566 | 979 | 1253 | 1843 | 1565 | 2474 |
| Frozen saithe | - | - | 20 | 24 | 40 | 68 | 141 |
| cod fillet | - | 224 | 431 | 627 | 688 | - | 104 |
| haddock fillet | - | - | - | 41 | 26 | - | 310 |
| Saithe fillet | - | - | - | 23 | 6 | - | - |
| Salted cod | 2966 | - | - | - | 1050 | 2097 | 1962 |
| | | | | | | | |
| **Denmark, total** | **19396** | **30352** | **28354** | **23146** | **17444** | **13797** | **20827** |
| | | | | | | | |
| Chilled cod | - | - | 445 | - | - | - | - |
| Chilled haddock | - | - | - | - | - | - | - |
| Chilled saithe | - | - | - | - | - | - | - |
| Frozen cod | 11121 | 16653 | 17699 | 17448 | 10774 | 10922 | 12731 |
| Frozen haddock | 1080 | 1119 | 1897 | 1878 | 1307 | 940 | 2451 |
| Frozen saithe | 2 | 6 | 17 | 1 | - | - | - |
| cod fillet | - | - | 1073 | - | 473 | 80 | 1438 |
| haddock fillet | - | - | 204 | - | - | - | 311 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Saithe fillet | - | - | 42 | - | - | - | - |
| Salted cod | - | - | - | - | - | - | - |
| | | | | | | | |
| **Iceland, total** | **6275** | **4175** | **5264** | **6881** | **5022** | **4427** | **8358** |
| | | | | | | | |
| Chilled cod | - | - | - | - | - | - | - |
| Chilled haddock | - | - | - | - | - | - | - |
| Chilled saithe | - | - | - | - | - | - | - |
| Frozen cod | 1450 | 623 | 111 | 1001 | 28 | - | 747 |
| Frozen haddock | 129 | 39 | 215 | 40 | - | - | 86 |
| Frozen saithe | - | - | - | - | - | - | 103 |
| cod fillet | 533 | 1653 | 2396 | 3825 | 3024 | 2661 | 4248 |
| haddock fillet | 293 | 150 | 528 | 351 | 3 | 282 | 1511 |
| Saithe fillet | 164 | 55 | 31 | 4 | 553 | 1 | 1 |
| Salted cod | - | - | - | - | - | - | - |
| | | | | | | | |
| **Spain, total** | **7403** | **9113** | **6064** | **4771** | **6232** | **5239** | **4348** |
| | | | | | | | |
| Chilled cod | - | - | - | - | - | - | - |
| Chilled haddock | - | - | - | - | - | - | - |
| Chilled saithe | - | - | - | - | - | - | - |
| Frozen cod | 31 | 1222 | 152 | 398 | 203 | 261 | 642 |
| Frozen haddock | - | - | 41 | 27 | 13 | - | 97 |
| Frozen saithe | - | - | - | 0.3 | 0.5 | - | - |
| cod fillet | - | - | - | - | - | - | 381 |
| haddock fillet | - | - | - | - | - | - | - |
| Saithe fillet | - | - | - | - | - | - | - |
| Salted cod | 465 | 1262 | 1414 | 1776 | 2000 | 800 | 825 |
| | | | | | | | |
| **Canada, total** | **4582** | **4225** | **11423** | **4228** | **3241** | **576** | **-** |
| | | | | | | | |
| Chilled cod | - | - | - | - | - | - | - |
| Chilled haddock | - | - | - | - | - | - | - |
| Chilled saithe | - | - | - | - | - | - | - |
| Frozen cod | 4303 | 1250 | 3647 | 97 | 1308 | - | - |
| Frozen haddock | 278 | 110 | 414 | - | 65 | 0.3 | - |
| Frozen saithe | - | - | - | 0.3 | - | - | - |
| cod fillet | - | 55 | - | 155 | 111 | - | - |
| haddock fillet | - | - | - | 80 | 113 | - | - |
| Saithe fillet | - | - | - | - | - | - | - |
| Salted cod | - | - | - | - | - | - | - |
| | | | | | | | |
| **China, total** | **-** | **-** | **7025** | **8095** | **8397** | **18978** | **19432** |
| | | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Chilled cod | - | - | - | - | | - | - |
| Chilled haddock | - | - | - | - | | - | - |
| Chilled saithe | - | - | - | - | | - | - |
| Frozen cod | - | - | 3262 | 4774 | 5252 | 15554 | 13444 |
| Frozen haddock | - | - | 142 | 323 | 228 | 1371 | 2302 |
| Frozen saithe | - | - | - | - | - | - | - |
| cod fillet | - | - | - | - | - | - | - |
| haddock fillet | - | - | - | - | - | - | - |
| Saithe fillet | - | - | - | - | - | - | - |
| Salted cod | - | - | - | - | - | - | - |
| | | | | | | | |
| **Norway, total** | **131084** | **120109** | **100747** | **78527** | **64944** | **67010** | **86160** |
| | | | | | | | |
| Chilled cod | 46426 | 27824 | 7689 | 7544 | 2454 | 2144 | 2351 |
| Chilled haddock | 3401 | 2392 | 575 | 721 | 141 | 163 | 200 |
| Chilled saithe | 396 | 219 | 78 | 35 | 21 | 31 | 22 |
| Frozen cod | 43635 | 49038 | 55154 | 45435 | 45023 | 46635 | 57576 |
| Frozen haddock | 4269 | 5178 | 8757 | 6913 | 4837 | 4022 | 7529 |
| Frozen saithe | 101 | 404 | 503 | 48 | 69 | 95 | 1 |
| cod fillet | 9292 | 13457 | 10019 | 6818 | 4734 | 1089 | 6553 |
| haddock fillet | 1846 | 2501 | 2333 | 1257 | 560 | 189 | 1073 |
| Saithe fillet | 415 | 478 | 252 | 36 | 37 | 9 | 6 |
| Salted cod | 804 | 89 | - | - | 395 | 159 | 1694 |
| | | | | | | | |
| **Portugal, total** | **8461** | **9455** | **10963** | **3401** | **9539** | **11915** | **13030** |
| | | | | | | | |
| Chilled cod | - | 1504 | 5181 | - | - | - | - |
| Chilled haddock | - | 62 | 429 | - | - | - | - |
| Chilled saithe | - | - | 42 | - | - | - | - |
| Frozen cod | 5373 | 3877 | 4793 | 2440 | 4236 | 3143 | 5248 |
| Frozen haddock | 285 | 205 | 415 | 172 | 59 | 10 | 492 |
| Frozen saithe | - | - | - | - | - | - | 32 |
| cod fillet | - | - | - | - | - | - | - |
| haddock fillet | - | - | - | - | - | - | - |
| Saithe fillet | - | - | - | - | - | - | - |
| Salted cod | 2803 | 3727 | 2 | 785 | 5129 | 8763 | 7259 |
| | | | | | | | |
| **USA, total** | **4129** | **4976** | **13736** | **16306** | **14146** | **14077** | **21207** |
| | | | | | | | |
| Chilled cod | - | - | 1200 | - | - | - | - |
| Chilled haddock | - | - | 97 | - | - | - | - |
| Chilled saithe | - | - | 2 | - | - | - | - |
| Frozen cod | 2198 | 2375 | 7570 | 8222 | 2408 | 2278 | 2379 |
| Frozen haddock | 638 | 246 | 710 | 683 | 620 | 121 | 345 |
| Frozen saithe | 3 | 1 | 10 | 4 | - | 7 | - |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| cod fillet | 79 | 60 | 2444 | 4494 | 7657 | 5585 | 4414 |
| haddock fillet | - | 49 | 180 | 999 | 1737 | 1568 | 1963 |
| Saithe fillet | - | - | 9 | 3 | 2 | - | - |
| Salted cod | 1191 | 160 | - | - | - | - | - |
| | | | | | | | |
| **Sweden, total** | **11085** | **11761** | **9938** | **14121** | **5204** | **14888** | **17642** |
| | | | | | | | |
| Chilled cod | - | 189 | 21 | - | - | - | - |
| Chilled haddock | - | 26 | 6 | - | - | - | - |
| Chilled saithe | - | 1 | 0.3 | - | - | - | - |
| Frozen cod | 9482 | 9836 | 8127 | 11678 | 4920 | 10231 | 11271 |
| Frozen haddock | 518 | 996 | 909 | 1009 | 279 | 957 | 1604 |
| Frozen saithe | 23 | 10 | 5 | - | - | 19 | 0.2 |
| cod fillet | - | 273 | 311 | - | - | 2525 | 2774 |
| haddock fillet | - | - | 2 | - | - | 113 | 24 |
| Saithe fillet | - | - | 4 | - | - | - | - |
| Salted cod | - | - | - | - | - | - | - |

## Appendix 4

## Export of Russian north-west white fish by countries

| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|
| | | | Tonnes | | | | |
| **Great Britain, total** | **8928** | **16852** | **29540** | **37601** | **21438** | **16883** | **87567** |
| | | | | | | | |
| Chilled cod | - | 14 | 213 | - | - | - | - |
| Chilled haddock | 3 | 4 | 30 | - | - | - | - |
| Chilled saithe | - | - | - | - | - | - | - |
| Frozen cod | 4479 | 5983 | 8132 | 20119 | 10810 | 10273 | 7362 |
| Frozen haddock | 799 | 917 | 2577 | 3102 | 2907 | 1898 | 2461 |
| Frozen saithe | - | 55 | 58 | 211 | 50 | 192 | 1 |
| cod fillet | 424 | 1642 | 3372 | 4575 | 2552 | 3234 | 1344 |
| haddock fillet | - | 247 | 376 | 350 | 307 | 841 | 407 |
| Saithe fillet | - | 17 | 164 | 76 | 21 | - | 4 |
| Salted cod | 108 | - | - | - | - | - | - |
| | | | | | | | |
| **Germany, total** | **11467** | **12392** | **7539** | **7814** | **10217** | **6430** | **7131** |
| | | | | | | | |
| Chilled cod | 2117 | 2802 | 1484 | 493 | - | - | - |
| Chilled haddock | 184 | 366 | 247 | 152 | - | - | - |
| Chilled saithe | 11 | 23 | 30 | 32 | - | - | - |
| Frozen cod | 7433 | 7003 | 3387 | 4389 | 6751 | 3902 | 4175 |
| Frozen haddock | 709 | 451 | 720 | 979 | 1702 | 1081 | 1532 |
| Frozen saithe | - | - | 30 | 46 | 71 | 111 | 135 |
| cod fillet | - | 69 | 128 | 164 | 161 | - | 24 |
| haddock fillet | - | - | - | 10 | 6 | - | 96 |
| Saithe fillet | - | - | - | 12 | 3 | - | - |
| Salted cod | 1131 | - | - | - | 325 | 613 | 535 |
| | | | | | | | |
| **Denmark, total** | **11908** | **16063** | **12688** | **12791** | **7814** | **6277** | **8446** |
| | | | | | | | |
| Chilled cod | - | - | 242 | - | - | - | - |
| Chilled haddock | - | - | - | - | - | - | - |
| Chilled saithe | - | - | - | - | - | - | - |
| Frozen cod | 6430 | 9326 | 9306 | 9480 | 5647 | 5025 | 5076 |
| Frozen haddock | 799 | 841 | 1240 | 1196 | 1112 | 852 | 1717 |
| Frozen saithe | 6 | 8 | 22 | 2 | - | - | - |
| cod fillet | - | - | 274 | - | 105 | 16 | 307 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| haddock fillet | - | - | 54 | - | - | - | 98 |
| Saithe fillet | - | - | 24 | - | - | - | - |
| Salted cod | - | - | - | - | - | - | - |
| | | | | | | | |
| **Iceland, total** | **2632** | **2988** | **2335** | **2353** | **1620** | **1547** | **2321** |
| | | | | | | | |
| Chilled cod | - | - | - | - | - | - | - |
| Chilled haddock | - | - | - | - | - | - | - |
| Chilled saithe | - | - | - | - | - | - | - |
| Frozen cod | 843 | 339 | 76 | 510 | 13 | - | 419 |
| Frozen haddock | 108 | 33 | 196 | 30 | - | - | 50 |
| Frozen saithe | - | - | - | - | - | - | 80 |
| cod fillet | 145 | 399 | 760 | 1009 | 835 | 608 | 749 |
| haddock fillet | 71 | 35 | 174 | 91 | 147 | 74 | 286 |
| Saithe fillet | 64 | 20 | 15 | 3 | 2 | 1 | 0.4 |
| Salted cod | - | - | - | - | - | - | - |
| | | | | | | | |
| **Spain, total** | **3499** | **4795** | **4536** | **2943** | **3928** | **3390** | **1984** |
| | | | | | | | |
| Chilled cod | - | - | - | - | - | - | - |
| Chilled haddock | - | - | - | - | - | - | - |
| Chilled saithe | - | - | - | - | - | - | - |
| Frozen cod | 17 | 650 | 71 | 225 | 106 | 134 | 253 |
| Frozen haddock | - | - | 21 | 14 | 10 | - | 61 |
| Frozen saithe | - | - | - | 0.3 | 0.6 | - | - |
| cod fillet | - | - | - | - | - | - | 100 |
| haddock fillet | - | - | - | - | - | - | - |
| Saithe fillet | - | - | - | - | - | - | - |
| Salted cod | 199 | 502 | 737 | 629 | 564 | 208 | 201 |
| | | | | | | | |
| **Canada, total** | **2399** | **3605** | **12127** | **6325** | **3982** | **1303** | **-** |
| | | | | | | | |
| Chilled cod | - | - | - | - | - | - | - |
| Chilled haddock | - | - | - | - | - | - | - |
| Chilled saithe | - | - | - | - | - | - | - |
| Frozen cod | 2225 | 644 | 1877 | 54 | 706 | - | - |
| Frozen haddock | 174 | 89 | 239 | - | 59 | 0.2 | - |
| Frozen saithe | - | - | - | 0.5 | - | - | - |
| cod fillet | - | 15 | - | 40 | 21 | - | - |
| haddock fillet | - | - | - | 20 | 30 | - | - |
| Saithe fillet | - | - | - | - | - | - | - |
| Salted cod | - | - | - | - | - | - | - |
| | | | | | | | |
| **China, total** | **-** | **-** | **7778** | **7600** | **4718** | **9576** | **8110** |
| | | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Chilled cod | - | - | - | - | - | - | - |
| Chilled haddock | - | - | - | - | - | - | - |
| Chilled saithe | - | - | - | - | - | - | - |
| Frozen cod | - | - | 1763 | 2514 | 2520 | 7157 | 5437 |
| Frozen haddock | - | - | 96 | 227 | 196 | 1046 | 1371 |
| Frozen saithe | - | - | - | - | - | - | - |
| cod fillet | - | - | - | - | - | - | - |
| haddock fillet | - | - | - | - | - | - | - |
| Saithe fillet | - | - | - | - | - | - | - |
| Salted cod | - | - | - | - | - | - | - |
| | | | | | | | |
| **Norway, total** | **97070** | **102587** | **93071** | **79608** | **68586** | **68141** | **46919** |
| | | | | | | | |
| Chilled cod | 23620 | 13784 | 3908 | 3768 | 1487 | 909 | 970 |
| Chilled haddock | 2137 | 1598 | 375 | 495 | 223 | 166 | 188 |
| Chilled saithe | 360 | 292 | 151 | 62 | 43 | 63 | 32 |
| Frozen cod | 23478 | 27294 | 29275 | 24441 | 22513 | 20026 | 21891 |
| Frozen haddock | 3129 | 3615 | 5574 | 4636 | 4158 | 3035 | 4450 |
| Frozen saithe | 124 | 632 | 814 | 55 | 130 | 94 | 1 |
| cod fillet | 2651 | 3709 | 3025 | 1744 | 1449 | 1089 | 1477 |
| haddock fillet | 472 | 634 | 649 | 319 | 225 | 189 | 317 |
| Saithe fillet | 200 | 288 | 172 | 23 | 27 | 9 | 5 |
| Salted cod | 282 | 34 | - | - | 120 | 159 | 406 |
| | | | | | | | |
| **Portugal, total** | **4587** | **5198** | **6271** | **1779** | **3847** | **3710** | **3901** |
| | | | | | | | |
| Chilled cod | - | 811 | 2801 | - | - | - | - |
| Chilled haddock | - | 47 | 282 | - | - | - | - |
| Chilled saithe | - | - | 91 | - | - | - | - |
| Frozen cod | 2928 | 2225 | 2660 | 1400 | 2253 | 1448 | 1938 |
| Frozen haddock | 240 | 161 | 323 | 129 | 47 | 9 | 274 |
| Frozen saithe | - | - | - | - | - | - | 20 |
| cod fillet | - | - | - | - | - | - | - |
| haddock fillet | - | - | - | - | - | - | - |
| Saithe fillet | - | - | - | - | - | - | - |
| Salted cod | 1419 | 1864 | 1 | 242 | 1480 | 2253 | 1669 |
| | | | | | | | |
| **USA, total** | **3318** | **4202** | **9444** | **9132** | **4999** | **3956** | **2998** |
| | | | | | | | |
| Chilled cod | - | - | 906 | - | - | - | - |
| Chilled haddock | - | - | 104 | - | - | - | - |
| Chilled saithe | - | - | 5 | - | - | - | - |
| Frozen cod | 1977 | 2138 | 5609 | 5578 | 1519 | 876 | 788 |
| Frozen haddock | 741 | 375 | 709 | 623 | 581 | 96 | 163 |
| Frozen saithe | 5 | 2 | 25 | 7 | - | 8 | - |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| cod fillet | 36 | 23 | 823 | 1246 | 1930 | 1113 | 710 |
| haddock fillet | - | 21 | 65 | 270 | 483 | 444 | 447 |
| Saithe fillet | - | - | 7 | 2 | 1 | - | - |
| Salted cod | 534 | 79 | - | - | - | - | - |
| | | | | | | | |
| **Sweden, total** | **6347** | **7244** | **5908** | **9377** | **2840** | **6044** | **7070** |
| | | | | | | | |
| Chilled cod | - | 118 | 12 | - | - | - | - |
| Chilled haddock | - | 21 | 4 | - | - | - | - |
| Chilled saithe | - | 3 | 0.8 | - | - | - | - |
| Frozen cod | 5419 | 5859 | 4846 | 6520 | 2606 | 4524 | 4697 |
| Frozen haddock | 426 | 716 | 601 | 638 | 222 | 777 | 1335 |
| Frozen saithe | 30 | 6 | 4 | - | - | 19 | 0.2 |
| cod fillet | - | 64 | 68 | - | - | 501 | 700 |
| haddock fillet | - | - | 0.5 | - | - | 39 | 9 |
| Saithe fillet | - | - | 1 | - | - | - | - |
| Salted cod | - | - | - | - | - | - | - |