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*The issues of price formation on the processing stage of herring  
production in Russia.*

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## **Background of the problem.**

Historically, the strategy of the Russian national sea fishing, which was worked out on the basis of the existing political dominant principles, level of knowledge on the state of the fishing resource, raw material technologies and market of the raw materials, was to get maximal catch from the existing sea resources and to make it disposable at the inner market. Fishery industry of the country, especially oceanic fishery, played one of the key parts in the food supply of the country.

After the Second World War there started an active building of expensive big fleet, containing different types of fishing vessels with and without fish processing capacities and also transport vessels, which practically had no operating limit. The part of the USSR fleet in the structure of the world fleet made up 30% by the end of the year 1992. Soviet fleets operated in most areas of the world oceans: 94% of fish resources was extracted in Russian EEZ, economic zones of other countries and high seas of the global ocean.

All this predestined the development of fish processing industry and its double structure: processing at sea and shore-based processing. Soviet Union based its processing at sea on large factory trawlers operating in distant waters. These fleets supplied domestic markets with frozen fish, either for sale as frozen fish or for further processing ashore.

The integrated Russian fishery industry, which could be described as “fishing-processing-realisation” mechanism, worked for one whole result, so processing industry was constantly supplied with raw materials and its production had going domestic sales through the mechanism of united state distribution system.

The change towards market economy in Russia resulted in serious difficulties for the fish-processing sector.

The impact of the disappearance of the Soviet Union from the map of the world, on the fishery industry of the country was obviously negative and drastic. Total catch was considerably reduced due to loss of traditional economic links and destruction of the centralised planning system. Between 1991 and 1994, landings by the Russian Federation fell by 46% from 7.0 million tonnes to 3.8 million tonnes, and production in the important processing fish sector dropped by 71%.

The change of structure of the fleet that was mostly characterised by withdrawal of long-distance heavy tonnage vessels (doing the most of sea processing) on the ground

of their low economic efficiency, as they traditionally operated in the red, increased the importance of shore-based processing.

Considerable reduction in total fish catches negatively influenced the fill of fish processing enterprises with raw materials. But the most negative impact on utilisation parameter of processing enterprises was provoked by disintegration of the fishery industry.

Badly planned and implemented privatisation process led to the situation, where about 90% of enterprises became privately held, many of which had strategic importance for the fisheries, such as ports, scientific research centres, production complexes. Many marketing and organisation connections have been broken and fisheries stopped its functioning as one production unit.

Current economic conditions and liberalisation of fish trade caused the situation when it was more profitable for fishing companies to deliver caught fish and repair their vessels abroad that launched a blow to shore-based infrastructure. This was followed by a collapse of state distribution system that resulted in a vicious circle, in which processors could not find a market for their products, while consumers were willing to buy the product but could not find it on the market.

The major decrease in fish production and problems in distribution structure caused drastic changes in fish consumption with overall per capita consumption falling from 24 kg in 1986 to about 9 kg in 1993.

Employment opportunities in considered and related activities ashore also have dropped markedly. Job cuts had place in both fishing and processing industries, but if in fishing industry it was in 3-4 times, than in processing – in 5-8 and more times.

As a result of disintegration of Russian fishery industry, processing enterprises lost not only essential fish supplies but also lost the opportunity to have common circulating assets with fishing industry needed for normal operating and development. Moreover, the costs on raw materials have risen significantly as fish prices went up close to the world level. As a result of free price policy sudden increase in total production costs occurred.

All these factors caused considerable drop in fish output for fish processors and led to the increase of imports, especially pelagic fish species of moderate value, such as herring and mackerel. Norway is the one of the biggest importer of cooled, frozen and salted fish on Russian domestic market.

After 1999 the supply of processing industries with raw fish has increased that was caused by implementation of several measures held by authorities of most of the fishing regions of Russia, including Murmansk. This led to increase of facilities utilisation parameter, considerable rise of labour productivity in the sphere and, consequently, to the growth of the industry profitability. At the same time the amount of imports reduced. But raw fish still absolutely predominates in export volumes, mostly on the ground of the fact that Russian processed fish does not meet European standards.

Sufficient investments are needed so that Russian processing facilities and technologies can be upgraded to western European standards. Inefficient usage of the facilities along with the absence of technological development made them unable to compete with foreign producers.

The current situation in fish processing sector represents one of the many consequences of irresponsible government policy that has been present for the past decade.

### **Problem statement.**

The current situation in processing industry, which is characterised by significant drop in the output and worsening of financial state of the enterprises, made it almost impossible to use their own resources for the purpose of production facilities renovation. Difficulties in the Russian banking sector, which are supplemented by high risk of investments into the industry given the present economic environment, make it also impossible for enterprises to get funds (especially long-time resources) from this source. This causes gradual fall of level of technical and technology performance within processing industry and underutilisation of operating facilities that determines low productivity in processing and, therefore, high production costs of a product and its relatively low quality.

The situation, when processors aim to cover their costs of production and realisation of this relatively expensive and low quality production, leads to increase in prices on fish products (Figure 1, also Appendix 4).

This worsens by improper financial and social policies held by the Government and local authorities, which create a situation of unequal competition conditions for

different processors and, thus, cause an absence of real market competition in the industry.

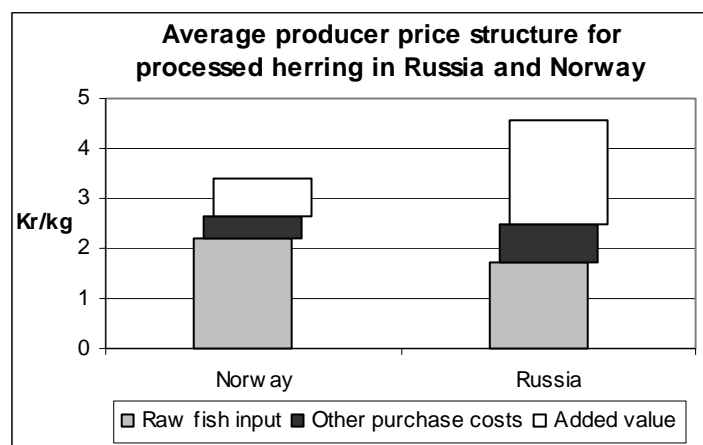


Figure 1. The structure and value of producer price of herring (without VAT) in Murmansk area and in Norway.

*Source:* the graph is built on data for the year 1999, which were taken from Norwegian Fish Export Council, Murmansk Statistical Bureau and Fiskeriforskning reports.

Thus, considering cheaper purchasing inputs for Russian processors, ***they have bigger level of added value than Norwegian producers do***, as, according to the Law of Value (Fisher, 1995), the value of a product is determined by average requisite labour input, which assesses average costs for production of this product in the industry.

Such price level of fish products is the purchase input for the next link on the market – distributors. Therefore, *given the situation of about 3 times lower price level in Russian consumer market* (figure 2) (that is normal for present macro-economic environment in the countries), it leaves the distributors only small price gap between producer and consumer prices for operating. Considering that the level of labour productivity in Russian distribution structure is lower than in Norway (on the ground of the absence of high productive retail and wholesale formats), the situation leads to the higher level of average added value on each stage of distribution structure also. This strictly limits the amount of distributors in the chain and keeps under the development of distribution structure that also causes regional circularity for fish products sales. It means that in case of transportation of fish production into other non-fishing areas of the country, costs increase, but consumer price of fish (including herring) is less in western-European part of the country on the ground of high market

saturation with meat and other grocery products. So there is almost no external market except regional for such fish products.

Thus, the whole problem can be formulated as the *dictates of fish prices by the processors on the market due to their high production costs*.

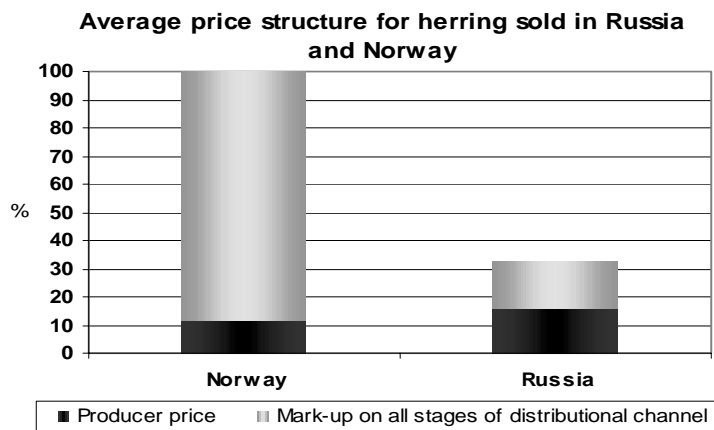


Figure 2. The value of consumer price of herring (without VAT) in Murmansk area and Norway.

Source: the graph is built on data for the year 1999, which were collected in Norwegian Fish Export Council and Murmansk Statistical Bureau.

The situation in Norway well illustrates the Russian problems. The ratio between producer and consumer prices in Norway, given the situation of lower costs in distribution, points at possibilities for well-developed branchy distribution structure and its influence on the processing.

There is a high level of competition in fish processing industry of Norway that stipulates labour productivity increase and limits the economic profitability of the production and, so the added value and producer price. It causes the situation, when Norwegian processors, having more expensive inputs (figure 1) have the same level of prices (or even less) as Russian processors. This makes it possible for Norway to export processed fish in Russia.

### Research objectives and hypothesis.

In order to find the exact reasons of such a high level of added value in the producer price of processed fish in Russia, I will concentrate on microeconomic



aspect of producer price formation (production costs) as the most definitive and well measurable factor for such analysis.

Murmansk area will be taken as the basis for research on the ground of the fact that it is an area with the big concentration of processors (due to its geographical position) that provide 14% of country production of processed fish for human consumption. Its closeness to Norway as the biggest Russian importer of fish with developed well functioning processing sector, sharing the same resource base, plays quite important role. Thus, the Russian experience will be compared to Norwegian one, which will be assumed to be “ideal” production, operating in conditions of developed market economy.

Atlantic herring (*Clupea harengus*) processing will be taken as a case for the analysis. The choice of this fish species for the research was caused by its prevalence in Russian processing industry output and import volumes, its moderate value and traditional popularity that, given current economic situation in Russia, predetermined stable market with high demand for this species.

Therefore, in order to find out economic conditions for present situation, the operational activity of herring processors of Murmansk area and economic environment for their activity will be analysed and compared to Norwegian experience.

The constantly growing prices of herring products and their high value, given the situation of abundance of fish processors in the area and impossibility for combination collusion between them, is the most probably a consequence of high production costs of all processors and their inability or unwillingness to reduce the costs.

*Thus, the research hypothesis is:*

***The situation of high level of added value in herring processing is the consequence of absence of competition between processors in the Murmansk region. This causes the problem of dictating of fish prices by the processors on the local consumer's market.***

## **Materials and methods.**

The data for the required analysis is obtained from the documentary sources in Russia and Norway, including official data publications and adequate information from the enterprises carrying out fish processing activities (the main source of data for this analysis are: balance of account, its enclosures (forms No. 2,3,4,5) and economic reports for internal use).

The methods for information collection included quantitative and qualitative analysis based on secondary data, such as interviews of experts and companies personnel, published or conducted personally. Assuming the contradictory and subjective character of information from such sources, this information was carefully analysed, its soundness was checked by comparison with primary data, and rather used for forming of my personal opinion than taking it as the fact.

In order to verify my hypothesis existent environment must be assessed. So in first part of the present paper I will concentrate on definition of economic environment for the fish processors of the Murmansk region by analysing the existent infrastructure, financial (including taxation and banking system) system particularities for the operation of fish processors and industry regulation and controlling mechanisms, concentrating mostly on constraints of considered elements. The analysis will be based mostly on secondary data.

Further in my work I will analyse the economic performance of processing sector of the Murmansk region, describing major conditions causing the current situation, as a base for further analysis of herring production and costs of this production in particular. The main cost components will be examined and compared with Norwegian parameters. This analysis will be based on primary as well as secondary data.

The main part of the present paper will concern the case study of one of the fish processors of Murmansk area. Detailed costs analysis will be given on the basis of estimating of microlevel conditions that influence the situation. Factors influencing the price will be described and final comparison of Russian and Norwegian practice will be given. Further in the work the results obtained through macrolevel and microlevel analysis will be compared and integrated with theoretical findings, and conclusions that will clear the problem will be made.

Assumptions and preconditions for the analysis.

1. All prices (Norwegian and Russian) that are given and analysed in the present paper are FOB (free-on-board) prices that means that a buyer pays all transportation expenses for product delivery from a producer to buyer's location, so transportation costs are not included in price. This method is most eligible for Russian market, where scatter of suppliers and consumers over the territory of the country is high. It is also convenient to deal with FOB prices conducting this research, as in our case (herring sold in Murmansk) results of economic analysis of producers activity can be distorted by the difference in transportation costs for Norwegian and Russian sides.

2. The prices that are taken for the analysis are the average prices for herring of different types of processing. The difference in average prices for different producers (figure 1) can be also based on composition variability of assortment. This can be explained by the fact that the specific weight of herring, processed in different ways, thus having different price, can be different for the variants under consideration. In other words, assortment composition of herring production affects the average price of herring under research. I assumed that the absolute dominance of frozen herring (more than 90-95%) in assortment of processed herring, in each case makes the influence of this factor minimal and does not change the general picture.

3. The level of FOB price of herring imported from Norway is identical to the price level of herring sold in Norway.

4. The activity of the analysed fish processing enterprise will be divided into three parts (primary activity, other operational activity (that includes financial market operations) and other activities (that are not connected with fish processing). Taking into consideration disproportionately large costs on last two items, I assumed that, given the situation of Russian economic environment, most probably these are the ways of hiding the profits of the enterprise from the main activity or, in other words, ways of tax avoidance for the firm (in case if it does that). Therefore, as only the main operational activity will be taken into consideration for the analysis, I will assume that the data for external use (that was given to me) was not changed (as it is usually done in Russia for the sake of profit non-disclosure) in this part. So the error associated with difference in data for internal and external use will not be taken into consideration.

## **Processing. Industry profile.**

The unique geographical position of Murmansk, as well as raw mineral and fisheries industries, has created a large industrial complex in the region. The region, which lies at the junction of international marine trade routes, offers year-round navigation. After the detachment of Baltic countries and, hence loss of their ports for Russia, the role of ports of Murmansk area has considerably increased: now it provides about 14% of fish food production in Russia and about 15% of the total turnover of products in ports of the Russian Federation (Chakolina, 2001). Food processing industry works out about 19% in the whole industry of the region.

### **1.1. National administrative structure managing the fish processing industry.**

At the federal level, the main body managing the fisheries industry of Russia is the Fisheries State Committee attached to the Ministry of Agriculture of Russia.

At the regional level the Fisheries Complex Committee of Murmansk Region accomplishes duties of such a body. The Committee is part of the administrative structure of the Murmansk Region and is responsible for managing the uniform state policy in the field of preservation and rational usage of fish, other water animals and plants together with committees and departments of the Regional Administration and Fisheries Committee of Russian Federation.

Managing the companies, which process fish and other seafood, as well as catching enterprises, is included into the process of managing the regional fisheries within the frameworks of the existing legislation of the Fisheries Complex of Murmansk Region. The procedure of managing in sphere of processing administration includes such major issues as:

- control over the state of the fisheries complex enterprises in accordance with a number of the major parameters, including catch, production output of fish products, interactions with budgets, etc.;
- the analysis of social and economic state of the sector;
- providing short-term and long-term forecasts on development of the sector.

## **1.2. Main activities of the processing sector of Murmansk area.**

Processing is carried out both at sea and on shore. Sea processing is mainly confined to freezing whole fish for further processing in Russia or overseas. There are a very limited number of the advanced, highly automated trawlers with modern equipment such as “Sevryba-1”, “Sevryba-2” and “Karelia” capable of producing value-added fish products of the best quality. The shore-based processing industry still consists of large number of companies producing canned and salted products for a traditional market, which is now changing. There are examples of companies doing new things and trying new management techniques.

There are quite a few companies devoted to processing in Murmansk area. A number of companies do some catching and some processing. Most fish is frozen before landing and little fresh fish is acquired by the market. Secondary processing is relatively basic and includes salting, smoking, marinating and canning of relatively few products. Although quality is good for the local market, there is little tertiary processing and packaging and marketing is limited. Even grading is rarely carried out with most graded products being imported.

## **1.3. Types of product produced.**

The nature of the products does not reflect the huge changes in social structure and working patterns within the country in recent years. These developments have an impact on the acceptability and need for new forms of fish products for domestic and institutional catering. The capacity to add value to good raw material, which already has a ready market, has not been realised but of a great significance for the future development of the industry.

The main assortment of products is represented by about 70 product lines such as canned fish (about 30 lines), short shelf life products in different brines (preserves), hot and cold smoked fish (the output of hot-smoked fish is quite low due to its short life and high price), salted and low salted fish. The brines are normally made of mayonnaise, mustard, spices with vegetables, oil and vinegar additives. There are a few companies producing some culinary products like fish pelmeni (fish mince in dough) (Frenkel, 1998). The basic raw materials for processing are pelagic fish

species: herring, mackerel and capelin. There is a little quantity of dried and cured fish on the market, which is mainly made of poutassou, capelin, bream and ruff.

As well as for pelagic species, cold smoking is also used to process halibut, salmon, cod, catfish, etc. There are opportunities to process cod and haddock of new kinds. New high value species such as shellfish and rainbow trout start to be introduced into processing, in small quantities though. Due to the insufficient supply of traditional raw materials, processors are starting to adapt new ones like lumpfish, pink salmon, vendace and bream.

#### **1.4. Companies involved in processing.**

Reorganisation of the fisheries has resulted in the split-up of large catching fleets and the simultaneous development of small businesses. In 1999, there were 201 enterprises working in the fishing industry, while in 1992 there were only 26 companies. Most of these enterprises are specialised in catching and processing at sea. More than 86% of the enterprises in the industry is small privately owned business (Pervuhin, 2000).

Currently there are about 40 companies of different ownership forms dealing with fish processing in some way in Murmansk area. As a result of a decrease in fish catches, facilities of large-scale and medium processing companies are only partly utilised: according to Murmansk Statistical bureau, in 1999, freezing facilities were half used, while not more than 8% of smoking, drying and curing equipment and 15% of canning facilities was utilised.

The number of people occupied in the fishing industry in 1999 was about 16 thousand, which is 9% more than in the previous year, but in comparison with 1992 level, the number has decreased by almost half.

#### **1.5. Constraints in the industry.**

There is a lack of direction in the regional government policies towards the fisheries industry. It has not yet proven possible to develop policies, which cater to the changed market, the privatisation process and the decline in availability in raw materials. There is a need for the Murmansk Regional Administration to provide direction at the administrative and government level.

However, the Fisheries Complex Committee of Murmansk region administration has no legal position, therefore it is not entitled to make decisions. This hampers its ability to manage effectively. The existing unions and various associations primarily co-ordinate the activity of the member fishing enterprises and defend their interests. Sevryba, which is used to co-ordinate the activity of all fishing companies in the northern region in the past, has been turned into a joint-stock company, and in a result of economic problems affecting it, has practically lost its status of co-ordinating and managing body for the Basin.

At present it is very difficult to make conclusions about stabilising the position of the fisheries sector of Murmansk area since the underlying reasons for the crisis in the industry have not yet been addressed. Certain improvements have been made by the Regional Administration together with concerned fishermen. For instance, the procedures for customs and boundary administration were simplified and 14 coastal fish processing enterprises were combined to establish the regional fishing company, Gubernsky Fleet, in order to supply the domestic market with fish and fish products. Since its inception, Gubernsky Fleet has caught over 5800 tons of fish, 65% of which was directed to local processing enterprises and to retailers in the region and the rest of the country (Chakolina, 2001).

In addition to the organisational problems, there are considerable legal difficulties due to regulation and taxation constraints placed upon the port. Tax and customs regulations are extremely complicated, often entailing high costs or long delays. It is for this reason that many vessel owners land their fish in Norway or EU coastal states rather than in their homeports. Some of this fish may ultimately be re-imported by land. The reluctance of vessels to land in their home ports also means that repair and maintenance is carried out elsewhere to the detriment of the ship repair companies now struggling in Murmansk.

Another factor is that a process of creating of a commercial structure has attracted a great deal of small and medium tonnage vessels, most of which are obsolete trawlers from overseas. It has resulted in an imbalance between the catching facilities and sources of raw materials from the Barents Sea. Nearly all catching vessels, as well as the processing equipment of land-base companies, become out of date, hence they do not meet conditions of market economy. According to experts' appraisals, there will be not more than 23% of the working vessels left from the current fleet by 2005, due

to their age and poor state of repair (Chakolina, 2001). Despite that, renewals happen far too rarely.

The processing sector is often short of raw material and packaging. The cash flow of processing companies leaves much to be desired and their debts grow that result into insolvency. Besides, the majority of them suffer from insufficient information on markets, lack in training in modern business management, unsuitable existing codes of practice in quality control and standards, inefficient technology, lack in training in modern processing techniques and insufficient information on product development. Banks do not provide a viable service to the industry. The interest rates are so high that it makes credits a robbery rather than a start for a good business.

### **1.6. Investments in processing sector.**

The turning point in the development of Russian fisheries (as well as of other industries) came in early 90-s, when Russian economy switched from centrally controlled to a market economy. Before that period, the Soviet fisheries industry was centrally organised. It operated with state subsidies and earnings from foreign license fees. The fisheries did not have to be profitable in it, as it was the part of the state production complex.

In the 90-s there was a large internal market in Murmansk for both traditional low value items and higher value (and lower volume) products. Though, production and marketing systems were poorly integrated and the wholesale system needed to be completely reviewed. Sales and marketing were previously organised through a single state company. After that period it was no longer effective and most companies undertook their own sales.

The supply of fish products dropped by half, so there was designed a pilot TACIS project in Murmansk to focus on the post harvest sector of the industry in order to improve suppliers of fish to the internal market, assist the Regional administration to formulate policies and develop strategies to cope with post privatisation changes in the industry, assist the processing industry to improve outputs from available raw materials (Chakolina, 2001). The project started in 1997 on the base of international consortium led by British company “Marine Resources Assessment Group” and had a total duration of 33 months.



Outcome of the project was quite effective from different angles. In order to provide technical assistance to operators in fish processing unit, new packaging lines were installed and separate sauce room was built and put in operation. This resulted in a significant increase in the production volumes that created more jobs (number of personnel was nearly doubled). The staff of the factory was trained in quality control and product development. All this led to a 15% increase in profitability of operation. In order to improve quality and supply of fish products, two retail shops were open and provided with new modern equipment and market information and distribution system was introduced at the cold store of “Sevryba”. It improved the efficiency of cold store operations, particularly the stock locations, stock control and expended this system to a networked one. The market information system initially installed in Murmansk was extended to sites in other northern areas of Russia, such as Arkhangelsk and Petrozavodsk, and provided North West Russian Sales and marketing system. The training courses on fish product development and business management were successfully carried out by TACIS experts.

### **1.7. Quality standards adhered for international and internal markets.**

All goods and services are subject to the obligatory certification, which is carried out by Gosstandart, the State Authority responsible for certification.

The industrial production of fish, fish products and seafood in the territory of Russian Federation is regulated by Federal Laws and Government regulations.

Complying with the internal quality regulations does not mean the goods can be exported. Processors must insure international standard quality criteria in order to be able to export products to certain overseas markets. So far, there is no land-based processing company carrying an export license in Murmansk area. That is why exports are done only by mother ships and fishing trawlers.

### **1.8. Main directions of economic policy of Russian Federation regarding processing sector.**

The Russian economic policy in relation to the processing sector of the fisheries industry should be designed to create a favourable business and investments climate. The federal government should take measures to create equal conditions for

competition, protect property rights, remove redundant administrative barriers and increase the financial transparency of enterprises and organisations. The systems of taxation and customs duty as well as the judiciary are to be reformed.

## **Marketing, trade and production environment.**

### **2.1. Consumption of seafood and consumer preference.**

The extensive use of fish products in Russia is predetermined by its natural conditions: numerous lakes, ponds, rivers, seas were home to a vast variety of fish. In the last ten years, the situation in terms of eating habits has been changing considerably. There has been a major decline in per capita fish consumption. After the Russian default in August 1998, sales of cheaper foodstuffs (bakery products, milk, and eggs) rapidly increased. Simultaneously, sales of fish, fish products and seafood went down. During the period 1990-1993 there was a market 53% decline in fish consumption. Consumption is now recovering and has reached 10.8 kg of fish per capita per year (Frenkel, 2001).

Falling consumption was related to availability and affordability. Following the reform progress and economic challenges of recent years, there remains a good demand for standard “value for money” fresh, canned, salted and frozen fish products among the middle and lower income groups in the Murmansk area. In order to ease the food situation for those who were in most need for food in Murmansk (such as pensioners and families with extremely low income) there was a social program “Cheap fish” run by a non commercial venture, “Association of fish producers”, with the support of the City Administration (Chakolina, 2001). Every month people could purchase a certain quantity of frozen fish at a price much lower than the market price.

Despite the fact that fish is sold in Murmansk below world preference prices, it is still rather expensive for the majority of the population. At the same time there is a growing value, added in delicate seafood market for foreign consumers and domestic high-income sector, which is currently supplied by imports.

### **2.2. Distribution structure.**

#### ***2.2.1. Wholesale structure.***

At the wholesale level producers sell through direct contacts with buyers. In some cases they supply through the former state sales organisations. Internal regional

marketing of fish and fish products is based on the connections and structures of the former system, which has now almost collapsed.

At present, fish marketing arrangements in Murmansk area remain irregular and informal. There is no centre for large or small-scale buyers to converge. Similarly, sellers have no formal outlet, which leads to logistical confusion within cities and compromises quality, as the valid regulations are difficult to apply. A wholesale market would act as a catalyst that would attract other service industries and consequently be a source of new employment.

### ***2.2.2. Retail structure.***

At the retail level throughout the region, developments of outlets for good quality, well-presented seafood is very poor. Currently there is only one retail chain “Nord-West” devoted to fish products offering quite a wide range of products, well iced and well presented in comparison with others (also offering additional services such as production delivery transportation) (“Russian Fisheries”, 2001). Ordinary shops and supermarket carrying a range of fish products usually do not have facilities to handle fresh and chilled fish. That is why their assortment is rather poor, consisting of basic frozen fish like cod, haddock, catfish and smoked and salted fish products, mainly vacuum-packed, and canned and short-shelf life products.

Fish markets do not exist as such, but there are fish departments at all food markets in the regional centre. These places are not specially equipped for fish trading (except for refrigerating units for chilled and frozen fish), so the fish is not presented very attractively. Fishmongers are normally self-employed sub-purchasers.

### ***2.2.3. Catering and institution.***

As for hotels and restaurants, they have to buy fish from the markets and, sometimes, small-scale wholesalers. Concerning schools, hospitals and kindergartens, there is a special administrative structure, which is called Kombinat Pitaniya, which is responsible for purchasing products for municipal organisations.

#### ***2.2.4. Availability of ice, chill and cold storage facilities.***

There are several large cold stores in Murmansk, which are rented out. The main ones are Sevrybsbyt, Sevrybservice, Vneshterminal, Vneshtans, Khladokombinat. The cold store Sevrybsbyt is used mostly due to its convenience in terms of location in the area of the Fish Port, and due to the range of services available.

Processing companies usually have their own storage rooms.

### **2.3. Imports and exports.**

#### ***2.3.1. Imports.***

The main fish products imported from abroad are herring, mackerel, cod roe, some quantity of salmon (all as raw material) and small volumes of different ready-made fish products, mainly shell-fish and canned fish.

The ruble devaluation in 1998 was the main reason for the decrease in fish import volumes over the last two years from 91 to 35 thousand tons, including herring and mackerel. As a result, total deliveries of herring (frozen and salted) to the Northern basin were reduced by more than half.

Fish products are imported into Murmansk area mainly from Norway, Denmark, Sweden, Great Britain, Iceland and from other Russian regions.

#### ***2.3.2. Quotas.***

The Russian-Norwegian Joint Commission on Fishery is responsible for allocating the general quota for catching fish and seafood in the Barents Sea.

The quota allocations used to be approved by Goscomrybolovstvo of the Russian Federation. However, since the Government proposal on auctions of industrial catching quotas for bio-resources has been accepted in 2000, there will be no further quota dispensations. All quotas for water bio-resources are sold at the auctions, and both foreign and Russian users have equal rights. In terms of the Russian economy, it may result in another significant decrease in the consumption of fish and seafood.

### ***2.3.3. Exports.***

Transformations of Russian economy that occurred in early 90-s, caused global market changes. Market transformations have allowed regional enterprise to actively use the opportunities given by the world market especially in terms of exports, which are now quite well developed. Murmansk area is included in the top 20 largest exporters of commercial output. Unfortunately, much of the export takes place directly from the fishing fleets to foreign buyers for hard currency.

The abolition of the government monopoly on foreign economic activity and the high level of demand for white fish on the international market has resulted in the bulk of sales of fish products, in the form of raw material and semi-ready products, to the western enterprises.

The main destinations of Murmansk fish products are: Norway (55% in value of total fish exports), Sweden, The Netherlands, Finland and Switzerland.

Fish products are one of the most important exports among the goods produced by local enterprises. In 1999, their share in the total export volume was 30% and exports of fish and seafood totalled 52% of fish production volume.

Unfortunately, such a prevailing of raw fish in export volumes, that is worsen also by significant amount of illegal catch and exports of the most valuable fish species and hydrobionts (which sometimes totals 50-100% of official reports), complicates economic state of most processing companies, causing lack of raw materials and absence of possibilities to increase their production effectiveness (Bobylov, 2000).

### ***2.3.4. Tariffs and regulations.***

In accordance with the customs tariff, the rates of the export customs duties for fish products are as follows (Taxation Code of the Russian Federation, 2000):

- live fish – 10% of customs cost (except for ornamental fish, which is duty-free);
- fresh or chilled fish, except for fish fillet – 10%;
- frozen fish, except for fish fillet – 10%;
- shellfish – 10%;
- molluscs – 10%;
- crabs, shrimps – 10%;
- lobsters, other water invertebrates – 10%.

All Russian fish and fish products can be exported to the EU countries provided they comply with EU regulations on food safety.

### ***2.3.5. National policy and strategy regarding the import and export trade.***

The external economic policy of the Russian Federation should be directed in providing better conditions for access of Russian goods and services to world markets and reasonable level of protection for the domestic market. It also should provide an access to strategic international resources for economic development, such as capital, technology, goods and services, which are not produced or have limited production in Russia, and guarantee a safety of the state as well as the consumers.

## **2.4. Fish market trends and constraints.**

Since 1999 certain positive trends have been apparent in the Murmansk region processing industry. Russian vessels slowly began to supply domestic processing enterprises with raw materials, so the turnover of fish products in the region increased that caused growth of fish processing industry share in the total industrial output of the region. That conditioned a growth of investments into the industry.

Observed stabilisation of prices on fish products during the period of 1999-2000 was caused mainly by decelerating of inflation rate, high degree of saturation of both wholesale and retail markets with fish products and high level of competition between both enterprises and trading firms.

But there are some negative factors that influence home market saturation and with fish products and consumers' demand level on fish goods:

- composed price disparity between material-technical goods and fish ones (for instance, in the period 1999-2000 annual price indexes for fuel, timber, etc. are 2-3 times higher than for fish products) (Frenkel, 2001);
- absence of economic grounds for use of home coastal industrial infrastructure by fishing fleet;
- underdevelopment of marketing investigations in the industry as a whole, as well as in regional Russian companies;

- destruction of fish-holding complex governmental system of Russia.

Marketability of fish products on the domestic market has a tendency to decrease and varies considerably over periods of time. This change is influenced also by different types and assortment of fish products.

According to the experts (Frenkel, Mokrenko, Shpachenkov, 2001), the proportion between wholesale and consumer price of fish goods is groundlessly high and unstable and has a tendency to grow. It is caused by presence of huge amount of intermediaries on the market and some criminal structures (which make processors to reduce their price on fish products, buy these goods and then sell it, blowing up the consumer price and keeping it on such a high level). Such a high rate of consumer prices on fish products negatively influences the demand on them.

There is a big spread of prices on the same fish products in different regions of Russia. Level of market saturation with meat and other grocery products has a big influence on price of fish goods and its marketability. Marketability of such fish product as herring of different types of processing varies considerably over the country. The lowest fish prices are observed for fishery regions.

High level of prices on fish products, their wide spread and big ratio of consumer prices to producer prices indicates about invalidity of price formation and self-eliminating of the state from the regulation of this process. Monopolistic features in behaviour of some fish market participants in the process of pricing and decrease in marketability of local producers on domestic market are caused by the underdevelopment and sometimes even the absence of valid law, financial and informational infrastructures.

#### ***2.4.1. Informational institutions.***

Informational institutions include developed material-technical net, which provides fast access to the market information for all market participants, and informational system, which is pooled data about market parameters in current and on-line modes. The main element of informational system is accredited system of standardisation and quality evaluation. At present, underdevelopment of this system makes almost impossible to organise an extra-mural trade. Therefore, the absence of developed system of market information, which is incidental to Russian economy nowadays, delays formation of market relations and distorts informational flows, significantly



increasing time and costs of market research conducting and looking for and investigating of business partners.

#### ***2.4.2. Law system.***

Law system, which is one of the most important elements of developed market, includes:

- a complex of regulatory enactment, regulations, authorisations, rules that guarantee the remedy of market participants under all possible situations;
- corresponding legally capable administrative and judicial systems;
- business ethics.

Shortcomings of law-making base and non-fulfilment of existing laws and law code of business ethics that exists in Russian economy, restrains the development of fish sales system.

#### ***2.4.3. Financial institutions.***

Financial institutions is an inherent element of market system that provides services for its functioning. Their insufficient development, insecurity and inaccessibility for the most processors increases risk and reduce possibilities to work out long-term market strategies. As a result, efficiency of operating of enterprises as well as of the whole fish market reduces. Currently on the ground of the lack of circulating assets and inaccessibility of bank credits for most Russian enterprises (due to the high values of liabilities), the use of non-monetary methods of payments such as barter, bills of exchange, cross-cancellation of debts, etc., widely spread.

##### ***2.4.3.1. Taxation system.***

Though the current taxation system of Russia is borrowed from practice of countries with developed economies, it has its own particularities. The main of them is that taxes gained from enterprises is a basic source for making the budget revenue (Karlik, 2001).

The Taxation Code of Russian Federation is presented by two parts (Part I of 1998 and Part II of 2000). Main taxes are presented in Appendix 3.

The Russian tax system is characterised by inconsistent and imprecise tax laws with lack of uniformity of terminology, that make it difficult for taxpayers to comply and for authorities to apply them properly. It results in confusion for the taxpayers and in extremely restrictive and unfavourable interpretation of the laws and decrees on the part of the Ministry of Finance and The State Tax Inspectorate (Mihailov, 2001). Moreover, different geographic jurisdictions apply the law in different way. It causes even more confusion, as there is no procedures for taxpayers to resolve such conflicts.

The major goal of Russian tax system is the compensating of the budget deficit. This is caused mainly by requirements of international financial institutions, which demand the retrenchment of budget deficit. As it was mentioned before, the main shortcoming of taxation in Russia is that it is oriented on budget deficit retrenchment by taking away enterprises revenues. So there is no adequate colligation between tax system and economic development and business activity of enterprises as its main elements. The loss of such a colligation led to the situation when tax system and enterprises, which experience its excessive pressure, develop in different ways. Many enterprises are loss-making or made bankrupt. At that, all enterprises trying to avoid heavy taxation are interested in gaining of minimum profit. As a result, the production output falls and companies are not interested in investment activities and production development. Economy turns to be cost-based economy. It is also supplemented with almost complete absence of competition in conditions of free pricing. The processors tend to shift a tax burden on consumers, including it in the price of product. It is possible due to the fact that producer can dictate the price and increase it in order to gain more profit for own consumption. Thus, tax system of Russia has inflation character and stimulates price growth.

But Russian tax system is built in such a way that tax payments grow when prices increase. Thus, there is an illusion of budget profitability growth, while it is caused by inflation factor, which increases deficit even more, as this factor influences its expenses in higher degree.

One of the most important shortcomings of current tax system in Russia is the absence of stimulating factors for formation of development proportions. The core of such proportionality is a relation between labour productivity growth and consumption fund growth at micro as well as at macro levels. An attempt to reduce

growth rate of consumption fund using taxation instruments was undertaken by the Government (by changing income tax rate using method of minimal non-taxable size if this fund). But it did not solve the problem of labour productivity growth stimulating, causing only the wish of the enterprises to find ways to hide real size of wages fund. The enterprises do it mostly by partition of wages fund on bigger number of workers, thus stimulating low productive labour with minimal payments for that and decrease in labour productivity.

Therefore, the taxation system of the country should be changed by turning its instruments on stimulating of production output growth and, consequently, growth of a taxation base.

#### 2.4.3.2. Banking system.

The Russian banking system is represented by two-level system, consisting of the Central Bank of Russian Federation and commercial banks including their affiliated branches, and other credit organisations that provide distinct banking services. It is not well established yet, but it has advanced rapidly since its inception in August of 1998, when commercial banks started to develop. There are currently over 1300 banks making up the banking system with the majority concentrated disproportionately in large cities. About one-fifth of the newly formed Russian banks derive from the old state specialised banks. Small and average size banks are prevailing in the system totalling 80% in the whole number of Russian banks (Murychev, 1999). About one-third of all Russian commercial banks play the most important role in the banking system. These are former specialised and sectorial banks with great state share in their registered capital.

The most resources of net bank creditors are accumulated in Sberbank. But they are usually used not for investing in the real sector of economy but for financing of the budget deficit. The majority of banks actually just redistribute resources received from some enterprises to other enterprises. Additional resources that are forwarded to crediting of enterprises are mostly formed on basis of bank capital and paper crediting. Exceptions from this are: Sberbank, which relies on its monopoly on the market of civilians' deposits, and foreign banks, which use credits of their primary banks.

According to calculations, in 1998-1999 banks supply only 40-43% of official economical turnover (or just about 24-26%, considering shady sector activities that total about 40% of GDP of the country).

The reasons of the unwillingness of banks to invest their resources into the real sector of economy are:

- Extremely high risks of investments in the production sector. Currently, crediting of production enterprises, which is usually used by enterprises for compensating of circulating assets shortage, is short-term crediting and is provided under the check export deliveries or finished liquid products. The degree of risk of long-term investments is incompatible with potentially possible profit rate from such investments.
- The fall in profitability on financial markets reduces investment resources of banks. Even assuming trouble-free business environment, the gross financial resources of majority of banks in Russia are not sufficient for providing significant investments into the production.
- The quit of the state out of the investment sphere badly affects investment climate.
- The majority of enterprises are not ready for reception of investments, when investors demand efficient use of financial resources, transparency of the companies' financial activities, etc. Many directors of companies still wish to attract extrinsic resources and not to be economically responsible for that.

All mentioned above results in complexity of credit obtaining for enterprises and high price of it (for instance in 1999 the average weighted short-term credit rate was 39.7%).

All this results in raising of popularity of commercial credits, which are aimed for speedup of the process of product realisation. The rate of such a credit is usually much lower than of the bank one.

According to experts' estimates, the wear and tear factor of fixed assets of Russian production enterprises exceeds 60%. Therefore, enterprises need to attract extrinsic resources for supporting of current operational activities and for their development. But the investment sphere of Russian economy remains in a crisis, causing the problem of investment resources deficit that is faced by the enterprises. For the purpose of exhilaration of investment activity in Russia it is necessary to:

- create a mechanism of formation of favourable investment climate (for instance, by using privileged investment crediting, reduced taxation of investment profit,

extensions of subsidies at the expense of the state budget, reduction of customs duties for imported raw materials and equipment and exported finished product, etc.)

- concentration of financial resources in the banking system (by creating an effective mechanism of attraction of civilians' deposits and own circulating assets of the enterprises, development of securities market, use of resources of leasing and insurance companies, investment funds, hypothecary crediting and so on).

By doing this it would be possible to provide capital inflow into higher-priority perspective spheres of national economy and, therefore, production.

#### ***2.4.4. Marketing research.***

As the results of conducted analysis show (Frenkel, Mokrenko, Shpachenkov, 2001) that underdevelopment of marketing research in the industry, as well as on individual enterprises, negatively influences the market of fish products.

Since the reforms started and until now, marketing for Russian processors is associated only with product realisation. Marketing researches are conducted occasionally, usually by staff from sales department. These sales departments have not yet become co-ordinators for production and technological departments and do not play big role in process of decision making, when new products are developed or production pattern is changed. So there is a strong need in qualified staff, who can work in this sphere, as well as in competent managers.

Almost one third of Russian fish processing enterprises do not conduct marketing research at all. They take in consideration only intrinsic problems of production and sales that does not encourage the development of market relations.

Underdevelopment of considered structures pushes enterprises to use standards of behaviour, which are distinct from civilised standards of competition, such as: default from obligation to creditors, delays in wages payments, use of non-monetary methods of payments, underreporting of output, use of unregistered labour force and other production resources, poaching, etc. Therefore, there is a strong need in interposition of the state in the process of market development.

## **Case study: Murmansk fish processing industry profile. Trends and constraints at macro-level.**

### **3.1. Fish market overview.**

The forming of Russian fish market has a row of specific particularities in comparing with markets in countries that have formed market economies. Such specificity is determined by a weak competition between producers; weak influence of distribution and secondary distribution intermediary structures; the split-off of resources between newly formed states (former republics of USSR); shortcomings of legislation and violations of law; a presence of non-economical (including criminal) market regulators.

After disintegration of USSR in early 90-s, set distribution network was destroyed as a result of collapse of large wholesale infrastructure that has lead to an increase in prices on fish products (producers had to form their own regional distribution nets or provide various intermediaries with tied credits in order to maintain sales). The increase in bank rates and the whole decline in citizens paying capacity caused competitive disability of Russian fish products and as a consequence, flow-in of a chipper import. As a result of distribution network collapse and raise in transportation costs, the interregional economical disintegration and tendency to zone circularity occurred. It led not only to the prevalence of geographical segmentation of the market but also to export volume expansion.

In late 90-s, as the result of various economical reforms, the situation has partially stabilised, mostly due to the presence of few large wholesalers in an every area, causing their monopolistic dominance that squeezes both producers and retailers in the sector.

The interregional disintegration still takes place in Russian economy (62.7% of fish products produced in Murmansk area is consumed there (Mokrenko, 2001) but interregional contacts are being restored, however mostly due to the business activity of large producers.

The import of different types of pelagic fish such as herring is more or less motivated for Russian economy, as local producers nowadays can not supply domestic market with fish products of moderate value to the full. It is also justified in terms of lower transportation costs, as they are 2-3 times less when herring is

imported in western Russia from Norway than from Far East. In the beginning of 90-s it was planned to reduce import volume by increasing domestic production and improving customer service level (Frenkel, 1998). Though, considering the current situation in fisheries industry and trends in its development, it is groundlessly to cut export volumes.

### 3.2. Processing sector overview.

According to McKinsey Institute study (1999), the main reason of a weakness of Russian producers is an extremely low productivity of labour in the sector due to old inefficient forms of organisation, lack of high return investments into new productive assets and lack of upgrade investments into old assets (table 3.1). Though high values of wear factor and rapid moral ageing of fisheries assets show need in high levels of investments for renovation of the fleet and processing facilities.

Table 3.1\*. Main qualitative indexes for capital assets of fisheries in Murmansk area in 1995-2000s (\* - according to data collected in Murmansk Statistic Bureau).

	1995	1996	1997	1998	1999	2000
<b>The value</b> of plant and equipment, million rubbles	6940	6381	4404	3623	3960	3404
The same, million \$	<b>1512.0</b>	<b>1236.6</b>	<b>759.3</b>	<b>358.0</b>	<b>160.5</b>	<b>121.1</b>
<i>Including:</i>						
Machinery and equipment, mil.rub.	... <sup>1)</sup>	4255	2809	2242	2632	1915
The same, million \$	...	<b>824.6</b>	<b>484.3</b>	<b>221.5</b>	<b>106.7</b>	<b>68.1</b>
Structures and buildings	410	412	524	418	351	333
The same, million \$	<b>89.3</b>	<b>79.8</b>	<b>90.3</b>	<b>41.3</b>	<b>14.2</b>	<b>11.8</b>
<b>Wear factor</b> of plant and equipment, %	58.8	59.9	51.5	52.2	48.3	42.1
<i>Including:</i>						
Machinery and equipment, %	...	64.3	56	56.5	43.4	44.5
Structures and buildings, %	...	50.3	54	56.1	54.8	57.1
<b>Investments</b> into plant and equipment in the industry, million rubbles	168.1	184.5	578.5	91.1	442.7	349.6
The same, million \$	<b>36.62</b>	<b>35.76</b>	<b>99.74</b>	<b>9.00</b>	<b>17.94</b>	<b>12.43</b>

<sup>1)</sup> Data is not available.

Negative trend in wear factor shows that there could be some retirement of the oldest assets and renovation of assets in fishery industry at the expense of updating existing assets and/or developing new ones. Though declining trend of plant and equipment value and reduction of investments over the period of time points that most

probably, investments were made mostly for old viable assets upgrading, and number of obsolete assets were retired.

Specialists from McKinsey Global Institute confirm that it is possible and effectual, given the situation, to increase average productivity in fisheries significantly still using viable old assets with limited upgrade investments for the purpose of improving quality of the output and energy efficiency.

Data shown on figure 1 also proves the fact that there was considerable retirement and upgrading of old assets in Murmansk area during the period of 1995-2000s, as the problem of excess workers, which is intrinsic to the old assets, was partially solved and number of workers maintained in the industry diminished. This happened also due to the fact that regional authorities did not use tax, credit and budgetary levers for so popular social purposes (making additional jobs) during that period (Pervuhin, 2000) that considerably helped producers to raise labour productivity. At once the output rise that shows that investments were effective and (considering all other conditions being stable) labour productivity increased (figure 3.2).

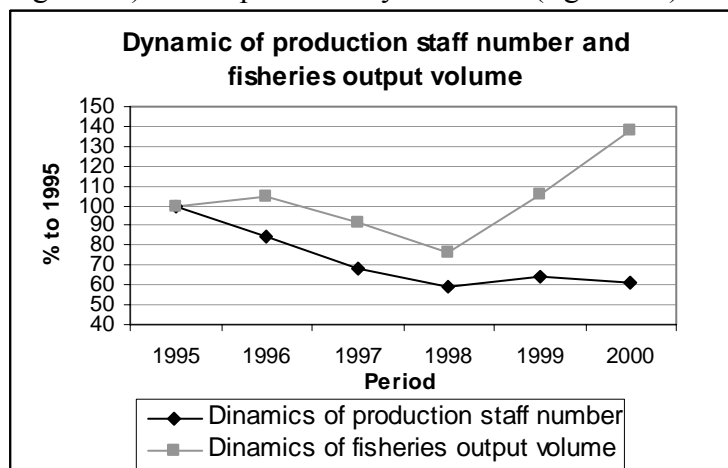


Figure 3.1\*.

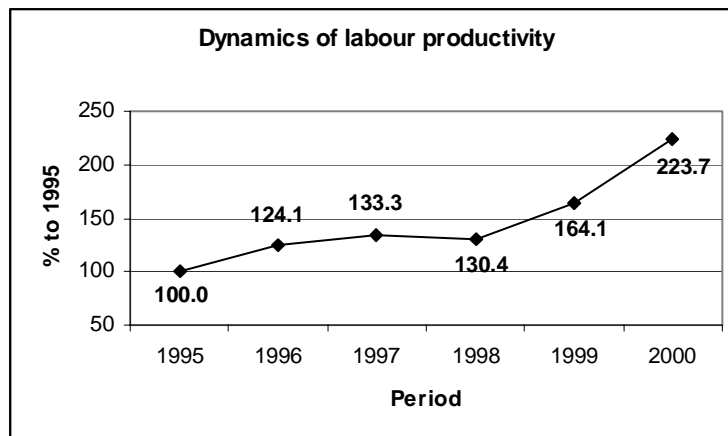


Figure 3.2.



The dynamics of utilisation factor of production facilities shows positive trend (figure 3.3) and it increased considerably during the period of 1999-2000s (following the trend in labour productivity, figure 3.2). Therefore, it supports the fact of overall labour productivity growth given the situation of diminishing labour power and limited investments, probably due to retirement of the oldest ineffective production assets, increase of fish supply in Russian ports that helped processors to use production facilities more effective and as I think because of the change in a number of fisheries companies (figure 3.5).

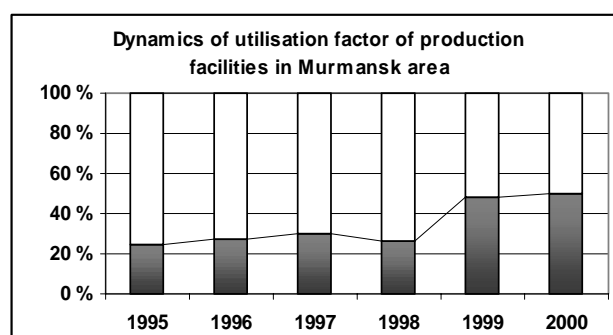


Figure 3.3.

Such a low utilisation factor of production facilities in herring fisheries can be explained by seasonality in herring catch as Atlantic herring is caught only 7 month per year (January-May, September-October) during its spawning season, so 41,7% of the time in a year herring is not delivered in ports. But it is worth to mention here that more than 90% of production facilities is freezers, which can be used for other fish products during periods of herring non-supply. Moreover, herring is very marketable product and buyers often pay up-front money (Sidorov, 2000), so it is usually bought fast from producers that indicates that there should be high speed of production cycle (especially in terms of dried and smoked herring production, while the utility of equipment for this production is 10 times less than of freezers, see appendix 1).

Therefore there are other factors that explain low rate of production facilities utility such as high value of raw materials and their considerable shortage, which is the consequence of an unwillingness of Russian vessels to call at Russian ports to deliver their fish and load plants (figure 3.4).

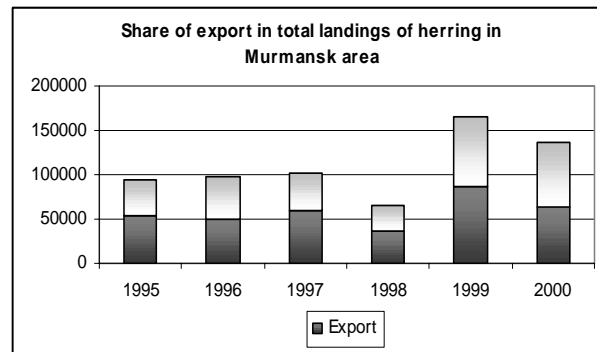


Figure 3.4\*.

The main reasons for such a high exports mostly of raw fish (according to State Statistic Committee report, about 25% of landings is not reported so its value of export can be higher on up to 33%) is difference in fish prices in Norway and Russia (price, which is paid to fisherman, is considerably higher in Norway, as its growth in Russia is controlled by the market conditions and government, which regulates the maximal price for fish that fishermen can get), differences in payment procedures, shortcomings of the custom rate regulations system and in process of handling of vessels in Russian ports. Leasing and bare-boat charter fleet avoids Russian ports due to the necessity of nonrecurrent customs payments and tax defrayal for vessels (only VAT is 20% from vessel value) and Russian fleet after repair - due to tax payments for repair materials and parts (Nazdratenko, 2001). Russian vessels, which enter Russian 12 miles zone, should pay import tariff for coming-in fish and should not make any customs payments when they leave Russian Exclusive Economic Zone (200 n. miles) that pushing them to deliver fish caught in Russian EEZ in Norway. There is also a serious problem of incoordinate work of various port services, which control calling vessels. Enforced extended fleet time-outs increase prime costs of fish. As a result of such situation vessels go to foreign ports not only to deliver fish but even for stand during nonfishing season.

In year 1999 there was a significant growth in utilisation factor of production facilities in Murmansk area (figure 3.3). Most likely it happened due to an experiment held by the Government of Russian Federation in 1999 that let bare-boat charter vessel to call at Murmansk port without paying VAT (20%) and custom payments (5%). Taxes and fees for national and local budgets for fish coming-in, processing and realisation during this experiment counted more then \$1.2 that exceeded previous customs payments and let processing plants to improve their financial state

(Nazdratenko, 2001). For the purpose of guaranty supply of processing facilities with raw produce the authorities of Murmansk area recently use the system of so called “interlocked” quotas when processing company gets a quota and contracts with fishing company for further catch and delivery of fish (Moskalyova, 2001). This step also helped to increase the utilisation of processing facilities during last two years but caused dissatisfaction of fishermen who have to deliver their fish on lower prices than market ones.

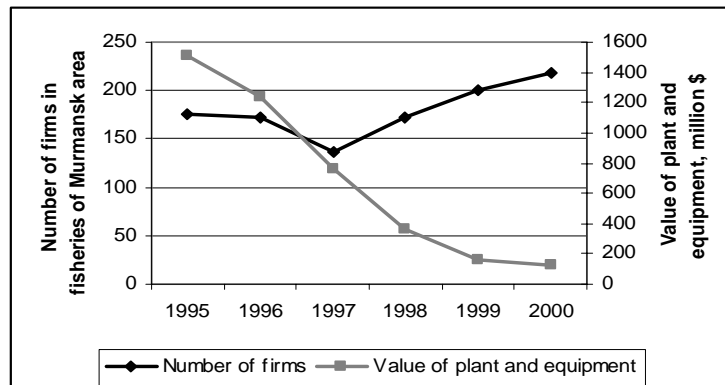


Figure 3.5\*.

During the period 1998-2000 the number of companies in fishery industry is on the increase (figure 3.5) that given the diminishing trend of value of plant and equipment helps to conclude that there was mostly splitting up of companies into smaller firms that can also partially explain the growth of productivity as the lack of organisational skills of most Russian companies managing staff probably plays less important role when firms are getting smaller and managing becomes less sophisticated.

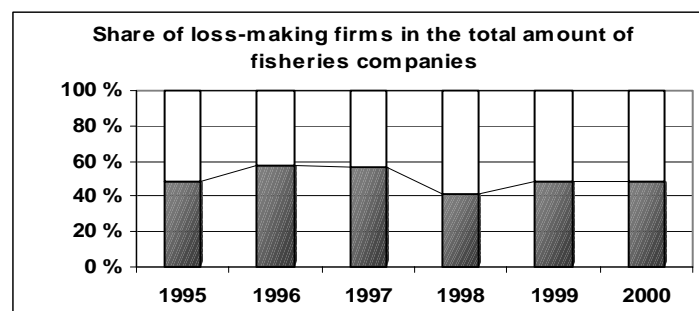


Figure 3.6\*.

After 1998 (crisis period in Russia when there was the dramatic fall of Russian currency) the increase of companies number is followed by significant growth of profit gained by fisheries companies (figure 3.7) followed by decline in share of loss-making firms (figure 3.6). This situation improved that is proved by a decrease in

costs of production (figure 3.8) and decrease of import volumes, as more expensive foreign products became unmarketable, so Russian producers could advance even adding price (figure 3.8) (Rybalova 2001). Such positive trends in 1999-2000 have been apparent in the Murmansk area on the ground of some economic improvements, based on changes in politics implemented by local authorities. These improvements included increase in supply of processing enterprises with fish that caused rise of fish products turnover in Murmansk, increase of investments in the industry and decrease of imported fish products (including herring).

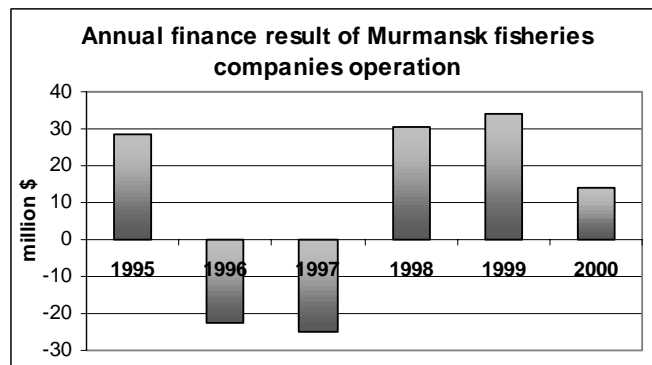


Figure 3.7\*.

### 3.2.1. Comparative analysis of production costs for Russian and Norwegian herring processors.

As it was mentioned earlier, in the period of 1999-2000s the profit of Russian fish processing companies had positive value, mostly due to reduction of costs throughout the industry including herring production, where costs per unit of output decreased in this period of time in comparison to the previous periods and price (figure 3.8).

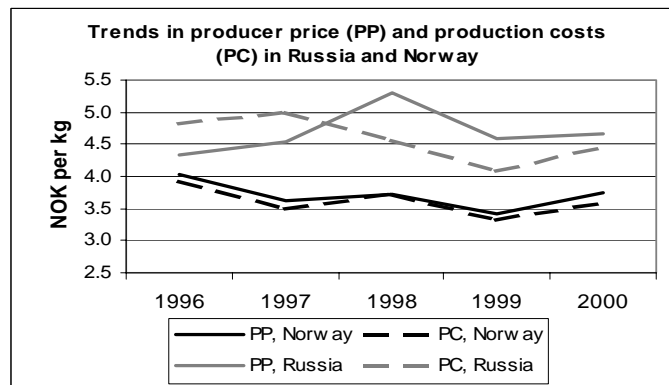


Figure 3.8.

In order to understand such a variable trends in costs of Russian herring production and to substantiate its value, it is soundly to divide costs into four main elements (figure 3.9) and analyse dynamics of every element in comparison with Norwegian experience (figures 3.8, 3.9, 3.10)

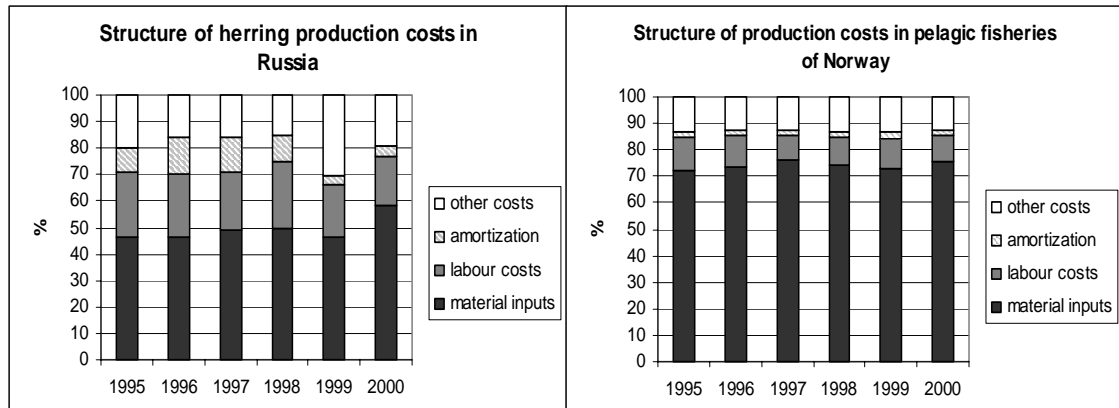


Figure 3.9\*.

Figure 3.10.

The structure of costs shows that having cheaper inputs Russian producers have smaller share of material costs in total costs of production, but they spend much more on labour, amortisation and “other costs” (taxes, fees, insurance payments, amortisation of intangibles, management, product realisation, etc.) that negatively influences their costs value and, thus, product price. Analysing the structure of costs in terms of fixed and variable charges it is easy to notice that the part of fixed costs in Russia is much bigger than in Norway. It proves the well-known fact that Russian producers usually set prices applying the method of full costs and fixed profit. Therefore, while they try to keep stable rate and value of profit given the situation of growing costs, it is necessary for them to raise the price of a product every time that makes it non-competitive. While experience of countries with developed economies (like Norway) shows that usually the best strategy for taking possession and maintenance of the market share is to sell cheaper product in terms of reduction of profit rate and getting necessary profit volume at the expense of bigger sells (Karlik, 2001). This shortcoming of Russian managers is deepened by the improper tax and credit politics of the state, which normally should support their activity and protect their interests on the Russian market, while now they keep processors in the situation when they are not interested in gaining profit at all (that was discussed in chapter 2 of the present paper).

In order to compare each element of costs of Norwegian and Russian herring processors, short graphical comparison of each element was conducted (appendix 2).

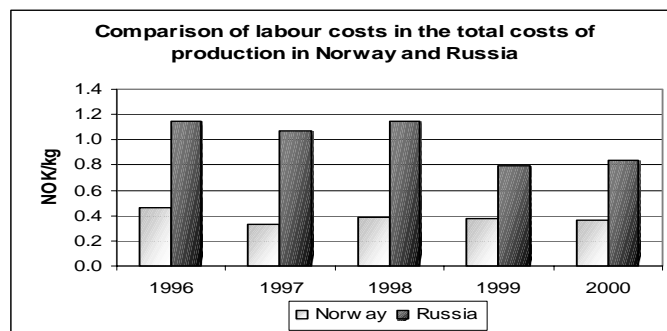
It is easy to see from appendix 2 that, while Russian producers retrench on material costs on the ground of chipper inputs (such as energy, fuel and raw materials), other costs of production are higher.

The excess weight of Russian amortisation and other costs over Norwegian ones per unit of a product is quite reasonable on the ground of ineffective utilisation of old low-productive facilities (that significantly increases weight of amortisation in unit costs), and use of unqualified managing personnel (that influence “other costs” item, which includes administrative and financial costs). However, the considerable excess of Russian labour costs over Norwegian costs is quite surprising, considering much lower (about 12 times) wage rate.

Therefore, more details concerning this question should be considered.

### 3.2.1.1. Labour costs.

Given the costs value per unit of a product and structure of costs of production, the real size of labour costs per unit of a product (kilogram of herring) in Russia is about twice as high as in Norway (figure 3.11).



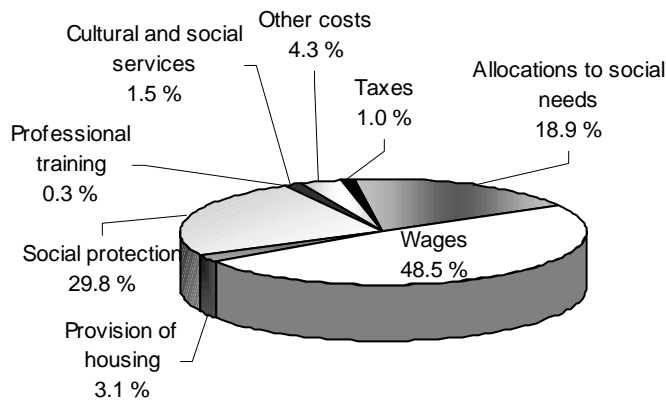
2.47	3.24	3.00	2.14	2.34
------	------	------	------	------

(Excess of Russian labour costs over Norwegian, times)

Figure 3.11.

The graph shows that while value of labour costs in Norway was quite stable, in Russia it changed considerably over the period of time and showed positive trend (reduced) in 1999-2000 but still significantly exceeded Norwegian ones.

The total volume of labour costs is composed of a list of items (preconditioned in the Statements on Cost Structure), the main ones of which are shown in figure 3.12.



*Figure 3.12. Labour costs structure in Russian fisheries (calculations are based on data from **Statistical bulletin 2000**).*

In Russian practice the “Allocations to social needs” item (which includes obligatory payments to Social National Insurance scheme, Pension fund, State Employment fund and Health insurance fund) was usually eliminated from labour costs and considered as a separate one. But for some time past the accounting method is being changed and the method of full labour costs is used here that also lightens the task of comparison with Norwegian ones. The total labour costs of Murmansk herring producers are shown in the table 3.2.

Usually costs on professional training are counted separately and not included in labour costs, but their share in the industry is too small (0.3%) and there would be no use to emphasise it though it is usually the second big item after wage in most foreign companies (Mazmanova, 1999). Such a slim expenses on professional training can be a cause of poor professional skills of workers and hence one of the reasons for low labour productivity in Russia.

The main qualitative indices of labour productivity in Russia are shown in the table (in order to dispose the inflation constraint and provide comparability of results with Norwegian parameters, all figures are analysed in Norwegian currency):

Table 3.2. Main indexes, describing use of labour in herring production of Murmansk.

	1996	1997	1998	1999	2000
Total labour costs (1000 Kr)	37063	31202	15840	40661	32948
Share of labour costs in sales, %*	27.2	26.3	18.5	22.4	18.6
Costs per worker (1000 Kr)	23.6	24.1	14.8	33.9	28.8
Change in costs per worker, %		2.2	-38.7	129.1	-15
<b>Indexes of labour productivity:</b>					
Sales per worker (1000 Kr)	86.63	91.82	79.85	151.40	154.46
Profit (before taxation) per worker (1000Kr)	-9.70	-9.55	11.10	16.50	6.95
Change of profit per worker, %		18.95	196.31	66.62	-59.82
<b>Output in an hour of effective labour:</b>					
Output (1000 Kr per hour)	86.10	74.59	53.95	115.07	112.91
Output (tons per hour)	19.90	16.50	10.20	25.12	24.18
Added value/hour (1000 Kr)	13.81	11.84	17.49	38.28	26.11
<u>Output (kg per worker per hour)</u>	<u>12.67</u>	<u>12.76</u>	<u>9.52</u>	<u>20.92</u>	<u>21.11</u>
Labour intensity (hours per a ton)	0.050	0.061	0.098	0.040	0.041

The change in labour productivity (the index «output per worker per hour» is taken for trend analysis of labour productivity, as it is not influenced by fluctuations in wages, currency rates, etc.) over the period was quite considerable with the positive shift in 1999-2000. It can be explained by significant increase in supply of Murmansk processing enterprises with raw materials in that period, as it reduced the number of redundant workers at the enterprises (who could not be fired on the ground of social policies implemented by the local authorities).

In the year 1999 there was some excess of wages growth rate over labour productivity growth rate, that is negative factor influencing fish production costs. In the year 2000 there was positive shift in considered relations but profit per worker reduced significantly that was caused by increase of materials share in costs.

In order to study out the reason of such a great spread between Russian and Norwegian labour costs per unit of a product, the labour productivity parameter for both countries should be compared.

On the ground of lack of precise data concerning Norwegian herring processing industry for the whole considered period and need in comparison of labour productivity in Russia and Norway, two following methods will be used for the year 1999 and compared (Table 3.3):



Table 3.3.

<b>Method 1 (comparison of output (kg) per worker in an hour of effective labour)</b>	
<i>Norwegian indexes (1000 Kr), year 2000:</i>	
Total labour costs in pelagic fisheries	345144 (data from "fiskforskning rapport")
Average labour costs per worker	352776 (data from statistisk sentralburå)
Average number of workers	978
Total output (1000 Kr)	3586324 (data from "fiskforskning rapport")
Output per hour (1000 Kr)	2288.7 (number of effective hours in year 2000 is 1567 (as in Russia))
Output per hour per worker	2339.3
Output (kg) per hour per worker	625.5 (price from exportcouncil data)
<b>Ratio of output of herring per one hour of labour (Norway/Russia):</b>	$625.5 / 21.11 = 29.63$ times (or labour productivity in Russia is only 3.26% from Norwegian one)
<b>Method 2 (using ratio of labour costs)</b>	
Ratio of labour costs per kg in Russia in comparison to Norway (graph 11)	2.34
Ratio of Norwegian labour costs per worker in comparison to Russian	12.26
<b>Ratio of labour amount used for production of one kilogram of herring (Russia/Norway):</b>	$2.34 * 12.26 = 28.69$ times (or 3.37% from Norwegian labour productivity)

Thus, calculations show that in order to produce one kilogram of herring in Russia they need to use about 29 times more of effort (time) than in Norway because labour productivity of Russian workers is only about 3.3% from Norwegian one. As I think, there are several additional factors, which were not included in the previous simple analysis but still influence the result of calculations and cause such a low value of this parameter:

- ✓ *Hidden unemployment in Russian fishery industry* (that reduces the value of personal output and average wage as the real amount of people involved in production process is actually less (on up to 30%, Nazdratenko, 2001)
- ✓ *Underreporting of data by fish producers* (according to State Statistic Committee report producers can underreport up to 25% of their sales so in reality the output can be bigger that also can cause underestimation of labour productivity).

Therefore, in order to get more precise estimation of Russian labour productivity, there should be made a correction in calculations that will:

- 1). diminish number of workers (on 30%, meanwhile labour costs will fall fractionally as these people get minimum salary (100 rubbles per month in year 2000 while average salary in industry was 4490 rubbles)) and
- 2). raise output (on 25% in both money and quantity terms) using the same level of costs as they are usually fully reported (appendix 1, second scenario).

*Method 1:*  $625.5/37.69 = \mathbf{16.6 \text{ times}}$  (or 5.7%);

*Method 2:*  $2.24 * 8.58 = \mathbf{20 \text{ times}}$  (or 4.74%).

The result shows that Russian labour productivity is about 5% from Norwegian one that is also very poor value for the parameter.

Therefore, the fact of extremely low labour productivity in Russian processing industry explains such a great difference between labour costs for the industries even given the much lower wages level in Russia.

As it was mentioned earlier, the main reasons of such an extremely low productivity of labour in the sector are: old inefficient forms of organisation (for instance, shortcomings in financial strategies that lead to low production profitability because of wrong price evaluation), lack of high return investments into new productive assets and lack of upgrade investments into old assets. All this is caused by shortcomings in economic and financial policies held by state and local authorities (mostly in sphere of taxation and crediting) that cause unequal competitive conditions on the market and lack of motivations to increase efficiency of production.

For instance, an attempt of the Government to reduce costs growth rate (by increasing labour productivity) using taxation instruments was undertaken (by changing income tax rate using method of minimal non-taxable size if consumption fund). But it did not solve the problem of labour productivity growth stimulating,

causing only the wish of the enterprises to find ways to hide real size of wages fund. The enterprises do it mostly by partition of wages fund on bigger number of workers, thus stimulating low productive labour with minimal payments for that and decrease in labour productivity.

Such policies also support low productive enterprises in order to achieve social objectives (such as protecting jobs), but in reality they serve the personal interests of some government officials in collusion with businessmen. Inefficient organisation and excess employment in old assets deepen this situation.

The examples of tools that create unequal competition conditions, which cause, for instance, fish market distortions are:

- Different tax rates for different companies within the sector
  - Preferential access to government procurements (such as quotas, especially free part of it, which normally should be shared in according with firm status that is sometimes quite subjective)
  - Variable degrees of red tape imposed on companies at the discretion of authorities
  - Differential law enforcement (for example, in the area of import tariffs)
- (McKinsey, 1999).

In order to induce the exact and more precise reasons of the situation of exceeding Russian fish production costs over Norwegian ones, analysis of a particular enterprise (micro-level analysis) as the main constitutive component of the industry, is conducted in the next chapter.

## **Case study: a fish processor operating in Murmansk area. Trends and constraints at micro-level.**

To consider problems mentioned before closer, in order to understand economical roots of such a situation on microeconomic level, the practice of particular fish processing firm will be examined. For this purpose I chose average (in terms of production volume and financial results) fish shore-based processor operating in Murmansk area and analysed its economic activity for last two years (1999-2000).

### ***4.1. History and description of the firm.***

The firm has been successfully operating for several years on the Russian market of fish products. Its employment and sales account for about 4-5% of the value of the whole fish-processing sector of Murmansk area. It was established in early 90-s on the base of fish-processing section in quite small settlement (biggest part of population there is fishermen) nearby Murmansk. The enterprise consists of four processing sections, employing about 450 people.

The enterprise's range of production is quite wide and covers frozen fish (mostly fish filet) of different species, which is traditionally the leading item, brine salted, smoked, dried and cured fish, etc. One of the significant activities of the firm is herring production, which makes up to 30% of total output. However, by the reason of lack of data pertaining to this particular production (for instance, because of the absence of product analysis that usually should be made by the managers in order to achieve the most effective production structure) and some technical reasons, it is impossible to calculate some expenses appertained to herring production. Though, in order to follow the process of herring price formation, it is important to look into pattern of business function of the enterprise using global financial and cost analysis.

The company has never been an exporter of fish products, its main market being north-western Russia. Now management of the firm is trying to set new contacts in the Eastern Europe to investigate the possibility of export supplies.

The legal form of the company is producers' cooperative. The Producers' cooperative, which, according to the Civil Code of Russian Federation (1999), is unenforced unionisation of citizens and/or legal bodies in terms of membership for joint production or another economic activity (production; processing; sale of

industrial, agricultural or other production; prosecution; marketing; public and other modes of services) based on their personal labour and other participation and pooling of dominial shares by its participants. Producers' cooperative is a commercial organisation. Profit of producers' cooperative is distributed among its participants (and sometimes in accordance with general meeting vote of members - its employees) according to their labour and/or other participation and/or share value. It is quite unpopular juridical formation in Russia on account of necessity of annual audit conducting, personal labour participation of cooperative members and chance of turn of creditor claims for the cooperative on them.

#### *4.2. Main economic indexes of operating.*

Table 4.1. Main economic indexes from primary activity (fish production) (1000 rubbles).

	<b>1998</b>	<b>1999</b>	<b>2000</b>
Annual production, tons	8975	11887	11976
Revenue	71324	164332	162875
Total Costs, inclusive	52783	120059	123664
Labour costs	8978	20994	21074
Material	30691	73861	74307
Amortisation	2764	1970	2215
Other	10350	23234	26068
Financial result (earning before taxes)	<b>18541</b>	<b>44273</b>	<b>39211</b>
number of workers, people	*	342	376
average annual labour costs per worker	*	61.386	56.048

\* Data is missing

In year 1999 it was a sharp increase of production output in connection with upgrading investments into fixed assets of the enterprise (table 3) that caused profit growth from this activity and changed costs structure (figure 1).

There are also several economic activities that are performed by the firm and are not quite successful, significantly reducing financial results in 1998 and 1999 (Table 4.2).

Table 4.2. Main indexes of all financial and economic activities (1000 rubbles).

	1998	1999	2000
Fish sales revenue	71324	164332	162875
Other operational revenues*	3048	7216	3831
Other revenues**	61	413	43
<b>Total revenue from all activities</b>	<b>74433</b>	<b>171961</b>	<b>166706</b>
Costs from primary activity	52783	120059	123664
Other operational costs*	27578	20012	6319
Other costs**	565	3942	1035
<b>Total costs from all activities</b>	<b>80926</b>	<b>144013</b>	<b>131018</b>
<i>Financial result from all activities:</i>	<b>-6493</b>	<b>27948</b>	<b>35688</b>

\* From financial activity of the firm that is not related to the primary activity (such as foreign exchange operations, acquisition of dividends and interest by the firm and so on)

\*\* From activities, which are not characteristic for this type of enterprise

The most expendable item from other activities of the enterprise is “Other operational costs”, which consist mainly of loss from foreign exchange operations. It had its maximum value in year 1998 and 1999 that was caused by economic crisis in august of 1998 and consequently unstable situation on currency market.

*Costs structure:*

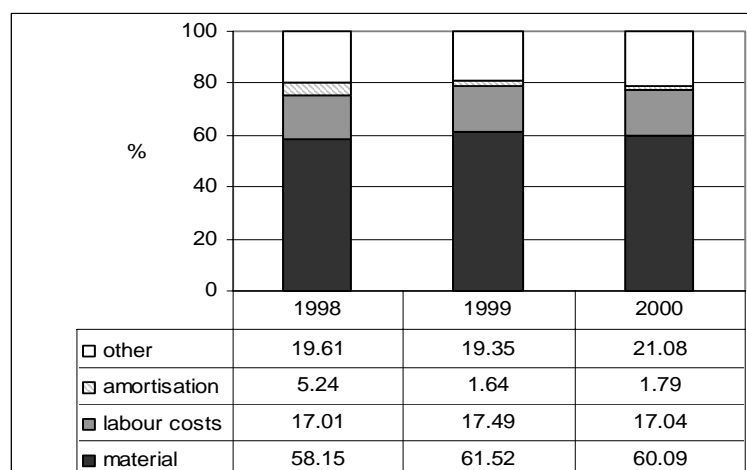


Figure 4.1. Structure of costs from primary activity.

Such a cost structure of fish production differs from average cost structure in Murmansk area and closer to Norwegian cost structure in pelagic fisheries (chiefly after 1999) (figures 3.9, 3.10). Thus, share of fixed costs seems to be smaller than average (amortisation, other costs (such as taxes, management and sales costs)) when share of material costs is larger, that points at more effective management of production as the enterprise spends less on labour, amortisation and other costs per

unit of output and, therefore, gains competitive advantage. In order to understand the nature of such advantages, it could be helpful to conduct financial analysis of operation activity (at a time comparing obtained characteristics with Norwegian experience<sup>1</sup>).

### 4.3. Financial analysis.

Table 4.3. Structure of assets and liabilities (1000 rubbles).

<i>Assets</i>	<b>1998</b>	<b>%</b>	<b>1999</b>	<b>%</b>	<b>2000</b>	<b>%</b>
Non-circulating assets	30018	39	39106	31.3	104033	88.1
<i>Intangible assets</i>	61	0.2	65	0.2	99	0.1
<i>fixed assets</i>	29956	99.8	39040	99.8	103933	99.9
<i>Financial assets</i>	1	0.0	1	0.0	1	0.0
Current assets	47003	61	85889	68.7	14076	11.9
<i>Goods</i>	6808	14.5	15864	18.5	11578	82.3
<i>Debts receivable</i>	1112	2.4	1192	1.4	790	5.6
<i>short-term investments</i>	0	0	0	0	0	0
<i>Monetary means</i>	94	0.2	88	0.1	108	0.8
<b>Total</b>	<b>89021</b>		<b>136995</b>		<b>118109</b>	
<i>Liabilities</i>	89021		136995		118109	
Owners equity	37633	42.3	63099	46.1	(-31682)	
Long-term liability	0		0		0	
Short-term liability	51388	57.7	73896	53.9	149791	126.8

The structure of assets of the company is quite similar with the Norwegian one (about 60% of current and 40% of non-circulating assets), except year 2000, when share of current assets reduced down to 12% (in connection with a purchase of expensive fixed assets (including a vessel) that caused the growth of liabilities and, therefore, lack of monetary means) that significantly decreased liquidity of the enterprise (Table 4.4). Share of borrowed capital in liabilities of the firm is smaller than the same index in Norway (about 70-80%) that can be mostly explained by the lack of stability in Russian economy, which makes the process of getting credits to be more complicated and expensive. Though, a recommended value of a share of borrowed capital in liabilities of Russian companies, which point at quite stable financial situation from creditors and investors point of view, is less than 50% (Stoyanova, 2002). Too high value of this index (as in year 2000) can lead to the lack

<sup>1</sup> All parameters pertained to Norwegian pelagic fisheries and used hereafter (except marked ones) are based on data taken from "Driftsundersøkelsen i Fiskeindustrien" by Fiskeriforskning (2001).

of monetary means and to the bankruptcy of a firm. Though, taking into account structure of liability (presence of only short-term liability, which mostly consist of liabilities to the budget, off-budget funds and obtained advance) stable economic activities of the enterprise with high rate of sales, additional credit sources and overall situation in the industry, this situation should not lead to the bankruptcy. In respect that borrowed capital of the company consists only of short-term liability, value of coefficients of liquidity acquires high importance for our analysis (Table 4.4).

Table 4.4. Dynamics of liquidity of the firm.

	Russia			Norway			Standard value
	1998	1999	2000	1998	1999	2000	
Current liquidity	0.91	1.16	0.1	1.18	1.36	1.40	1-2 (or 1-3) >1 for developed market economies, >0.7-0.8 for Russia* >0.2-0.25 in Russia, is not often used in Western practice*
Prompt liquidity	0.78	0.95	0.02	0.76	0.90	1.02	
Absolute liquidity	0.0018	0.0012	0.0007	0.21	0.16	0.23	
Net working capital (1000rub)	-4385	11993	-135715				Should be positive

\* Stoyanova E.S. (2002)

All coefficients of liquidity of the enterprise (which show assurance of an enterprise with resources for liquidation of short-term liabilities, so its financial soundness) significantly decreased in 2000 in connection with sharp decrease of current assets and presence of accumulated losses (mostly on the basis of expensive assets purchase without preliminary accumulation of monetary means for this aim) that caused reduction in owners equity and consequently growth of short-term liabilities (table 4.3).

Coefficient of current liquidity (that shows adequacy of current assets, which can be used for repayment of short-term liabilities) is the main index for liquidity measuring for foreign companies (Stoyanova, 2002). It exceeds 1 for Norwegian pelagic fisheries and has positive trend over the period of time that points on financial soundness of the fisheries (as there are enough resources to repay short-term liabilities) and growth of attractiveness for investors (as they have financial resources for development in the future). The low value of prompt liquidity, which shows ratio of the most realisable part of current assets (debts receivable, short-term investments and monetary means) to short-term liabilities, for Norway in 1998-1999 points at too



large share of low liquid goods in current assets. Though, in year 2000 this index increased that meant that producer did not need time for goods realisation (for customer search and payment obtainment) to pay its short-term liabilities, so financial soundness of Norwegian fisheries increased.

Taking into consideration unstable conditions of Russian market and absence of law regulations for collection of debts by an enterprise, it is quite inappropriately to define current and prompt liquidity for Russian firms. In most cases it is more reliable to estimate assurance of an enterprise only with monetary resources for liquidation of short-term liabilities using coefficient of absolute liquidity (Stoyanova, 2002). For our firm it was far below its recommended value (Table 4.4) that shows from one hand, that company is under the threat of bankruptcy, and from other hand, that it uses all credit difference as additional capital, gained by the firm at the expense of short-term liabilities (as there is a time period between granting of a loan and its clearance) (Stoyanova, 2002). However, negative trend and too small value of this parameter point at low financial soundness that can redound upon possibility of getting credits.

To estimate how effective the enterprise uses its capital (both equity and borrowed) it is necessary to estimate indexes of turnover as speed of firm's funds transition into monetary form affects financial soundness of a company.

Table 4.5. Indexes of economical activity of the enterprise.

Index	Russia		Average in Norway	
	1999	2000	1999	2000
Assets turnover	1.45	1.42	2.32	2.22
Turnover of debts receivable (days)	2.56	2.22	49.74	59.24
Turnover of trade liabilities (on suppliers) (days)	10.38	57.28	(-)*	(-)*
Inventory turnover (days)	35.81	43.54	33.69	30.00
Operating cycle duration (days)	38.37	45.76	83.43	89.24
Capital productivity	5.18	2.38	6.86	6.91
Turnover of owners equity	3.26	52.78	8.89	8.22

\* Impossible to count in connection with lack of data (though should be close to turnover of debts receivable)

Coefficient of assets turnover, which describes effectiveness of all firms' resource use regardless to the sources of their procurement, shows how many monetary units of sold product every money unit of assets gains (Stoyanova, 2002). It has quite high value for the enterprise even in comparison to the Norwegian average, mostly on the ground of high degree of wear of its fixed assets. The method of amortisation used by firms has big concern here also, as Russian enterprises (including this particular one) prefer to use even method of amortisation, while foreign companies in conditions of

rapid technological development often use method of accelerated amortisation (Karlik, 2001) that can increase assets turnover value but only by virtue of differences in accounting methods. Though, on the whole it is lower than in Norway because of lower overall industrial and technological potential of the company that results in much lower labour productivity level and, therefore, output level.

In order to compare conditions of commercial crediting, which the enterprise provides to others and obtains from them, we can look at coefficients of turnover of debts receivable and trade liabilities that show the period, which company needs for paying its debit and credit indebtedness. Their value show that the company has quite beneficial financial performance, as inflow of monetary means from debtors is more intense than outflow of monetary means to creditors, so the company can use the difference as additional capital. Though, I think, it can reflect a shortage of monetary means and affect the availability of suppliers and name of the firm in a long run.

The high value of inventory turnover of the company (in comparison to average value in Russian fish processing industry (Karlik, 2001) and even to Norwegian rate) shows that period needed for inventory sale is quite short that, together with very high rate of debts receivable turnover, points at high liquidity of current assets. Thus, it is appropriate to use index of current liquidity for estimation of financial soundness of this particular Russian enterprise.

The index of operating cycle duration shows how many days producer needs for production, sale and money collection for his product or another words how long monetary terms are tied in inventory (Stoyanova, 2002). Its value is about twice less than average Norwegian operating cycle duration (because of faster debts receivable turnover even though inventory turnover is slower) that gives to the enterprise an opportunity to use its non-circulating assets more effectively.

The capital profitability of this company, which shows effectiveness of fixed assets use, had extremely high value for Russian fish processing industry (average value for Murmansk area is about 0,15) and in the year 1999 was on the same level as Norwegian capital profitability. It was reached at the expense of cheap fixed assets while in Norway it is reached at the expense of their high technical level. Reduction in capital profitability for the firm in the year 2000 points at too high rate of investments into this type of assets, as there were no corresponding increase in output.

The value of coefficient of owners equity turnover, which defines rate of invested capital turnover and, therefore, the activity of monetary means ventured by members

of producers' cooperative, fluctuates considerably in examined period, while Norwegian value is stable and has moderate value. In the year 1999 its size was about 3 times less than Norwegian one that could point at necessity to invest these resources into other sources of profit taking because of an inactivity of their part (index of return on owners' equity, which shows efficiency of capital, invested by owners, is analysed in Table 4.6). In the year 2000 this index significantly rose that showed considerable excess of sales over the amount of owners' equity. It involved an increase in credit liabilities and in ratio of liabilities to owner's equity that could be one of the reasons of price reduction in 2000 and profit decrease.

Table 4.6. Indexes of profitability.

	Russia		Norway	
	1999	2000	1999	2000
Net profit from main operational activity (-35/24% profit tax), 1000 NOK	9224	8015	68957	99666
Return on owners' equity from main operational activity	57.2 %	825.9 %	20.8 %	22.8 %
Weighted government bonds yield	24.0 %	12.6 %		
Return on assets	25.5 %	22.2 %	5.4 %	6.2 %
Return on sales	17.5 %	15.6 %	2.3 %	2.8 %
Return on owners' equity from all activities	36.1 %	751.7 %	2.4 %	13.1 %

Even though the turnover of owners' equity in the firm in 1999 was slower than in Norway, its profitability was higher (and also higher than possible return on alternative investments into highly profitable government bonds) because of much higher return on sales in Russia. . In the year 2000 its value jumped up significantly on the ground of abrupt decrease of owners' equity value.

Difference between return on owners' equity and return on assets values can be explained by the attraction of external sources of financing. The best situation in this case is when company, attracting borrowed sources, gets more profit than should pay back on the credit (Stoyanova, 2002). I think the economic results of our company operation point at quite effective use of borrowed capital that we can check by using the concept of earning before interest and taxes (EBIT):

Table 4.7.

	1999	2000
1).Earning before taxes	44273	39211
2).Credit interest	1291	4909
3).EBIT	45564	44120
4).Share of borrowed capital in liabilities	55.4%	97.3%
5).EBIT share earned as a result of credit use	$45564 \times 0.554 = 25242$	42929
6).Earning (before taxes) share earned as a result of credit use	$25242 - 1291 = 23951$	<b>38020</b>
7).Total earning before taxes	<b>44273</b>	<b>39211</b>

The positive value of profit share earned with the help of borrowed capital (line 6 of table 4.7) points at effective use of it.

The value of return on assets (ROA) (which is one of the most important indicators of competitiveness) was much bigger for Russia that can be explained by use of DuPont system (Brealey, Myers, 2000):

ROA = Assets Turnover (Sales/Assets) x Return on Sales (Net Profit/Sales).

For our enterprise: (1999):  $0.255 = 1.45 \times 0.175$   
(2000):  $0.222 = 1.42 \times 0.156$   
For Norway: (1999):  $0.054 = 2.32 \times 0.023$   
(2000):  $0.062 = 2.22 \times 0.028$

The growth of ROA value in each country is limited by competition level, so firms face a trade-off between the Assets Turnover and the Return on Sales (Brealey, Myers, 2000). The high rate of return on assets coefficient on this enterprise is reached mostly by high value of return on sales as they can not reach high rates of assets turnover (even given their cheap value) on the base of their lower productivity.

However, the value of return on sales is very high and they can achieve even higher value of this parameter by becoming more vertically integrated in connection with a purchase of a vessel in the end of the year 2000 (that is acquisition of supplier) that, though, will reduce assets turnover value (that has already happened in 2000 but was not so obvious on the ground of considerable decrease of current assets value).

Though, the value of ROA for this particular enterprise is extremely high in comparison with fish processing industries both in Norway and Russia. The law of DuPont for Russian fish processing industry (year 2000) is:

$$0.045 = 0.89 \times 0.051.$$

Thus, it is common for Russian fish industry, given the situation in the economy (lack of investments and consequently lack of high productive assets), to solve the ROA trade-off in favour of higher return on sales by increase a profit rate and, thus, a price of their product that causes decline in competitiveness.

In order to follow the reasons of such a high values of fore-mentioned coefficients for this particular Russian company in comparison to average in Murmansk area, we can conduct the brief analysis of the components of these coefficients and their determinative factors.

#### **4.3.1. Operation analysis.**

It was mentioned before that the facilities utility in Russian fish processing industry is extremely low that influence costs of production by increasing weight of fixed costs per unit of a product and, thus, reducing profit rate. Therefore, in order to trace through a dependency of financial results of operation on costs and volume of output and sales, the operation (Costs-Volume-Profit (CVP) analysis of the company will be conducted. Key elements for this analysis are:

- operating leverage (which shows how the change in revenue have an effect on change in profit);
- profitability threshold (break-even point);
- safety margin.

The goal of CVP analysis in our case is to estimate an effectiveness of chosen by the firm strategy of maximising profit on the ground of recoupment of expenses and relative decrease of fixed costs per unit of product. With this end in view, net revenues will be compared with total, fixed and variable costs.

#### **❖ Labour costs.**

Table 4.8. Division of labour costs on their fixed and variable constraints.

Workers category	Pay level	Share of wages to this Category in total wages fund		Share of this Type of pay Level	Sum	
		1999	2000		1999	2000
Pieceworkers	Piecework pay time wages	46.5 %	47.5 %	80 %	7810	8008
				20 %	1952	2002

Time workers	time wages	10 %	12.2 %		2099	2571
Employees	time wages	25.5 %	24.8 %		5353	5226
Administrative staff	time wages	18 %	15.5 %		3779	3266
Fixed costs share	time wages				13184	13065
Variable costs share	Piecework pay				7810	8008

❖ **Amortisation** (fixed costs).

❖ **Material costs.**

Table 4.9.

Item	Sum		Costs type	Share of costs of this type in total costs on this item		Sum	
	1999	2000		1999	2000	1999	2000
Fuel	4431.7	4458.4	Variable	70 %	72 %	3102	3121
			Fixed	30 %	28 %	1329	1338
Energy	10045	10106	Variable	34 %	34.4 %	3415.3	3436
			Fixed	66 %	65.6 %	6629.8	6669.8
Water	1772.7	1783.4	Variable	80 %	80 %	602.7	606.3
			Fixed	20 %	20 %	1170	1177.02
Basic materials	46784	49043	Variable	95 %	95 %	44444.5	46590.5
			Fixed	5 %	5 %	2339.2	2452.1
Low value articles of high wear rate	6544	6539	Variable	95.0 %	95 %	6216.8	6212.1
			Fixed	5 %	5 %	327.2	327
Services performed by other organisations	590.89	594.46	Variable	20 %	20 %	118.2	118.9
			Fixed	80 %	80 %	472.71	475.6
Other costs	3693.1	3715.4	Variable	50 %	50 %	1846.5	1857.7
			Fixed	50 %	50 %	1846.5	1857.7
Fixed costs share						14114.8	12364.7
Variable costs share						59746.2	61942.3

❖ **Other costs.**

Table 4.10.

	1999	2000	Type of costs
Other costs, total	23234	26068	
Amortisation of intangibles	65	99	Fixed
Commercial costs (% for credit)	1291	4909	fixed
Management costs (costs of sales, advertisement)	7169	6233	Mostly fixed
Taxes, included in prime costs of a product:	2433.3	3712.62	
Enterprise assets tax (2% from non-circulating assets value)	709.04	1974.84	Fixed
Tax on police maintenance (2% from min wages fund)	6.8	7.5	fixed
Transport tax	60	83	Fixed
Road tax (1% from sales volume)	1643	1629	Variable

Land tax	11	14.5	Fixed
Education tax (1% from min wages fund)	3.42	3.76	Fixed
Insurance contributions	2142	3021	Fixed
Communication expenses	54.3	68.2	Fixed
Other costs	7646.1	4312.56	mixed (assume that fixed)
<b>Variable costs</b>	<b>1643</b>	<b>1629</b>	
<b>Fixed costs</b>	<b>21591</b>	<b>24439</b>	

Results of calculations are presented in the table:

Table 4.11.

	1999	2000
Revenue, 1000 rubbles	164332	162875
Average price per ton of a product, rub	13825	13600
Tons produced	11887	11976
Total costs, 1000 rubbles	120059	123664
<b>Fixed costs</b> , 1000 rubbles	52503	53557
<b>Variable costs</b> , 1000 rubbles	67712	70107
Variable costs per ton of product, rubbles	5469	5620
<b>Margin</b> (revenue-variable costs), 1000 rubbles	96620.2	92768.1
<b>Operating leverage</b> (margin/profit)	2.18	2.37
<b>Profitability threshold</b> (fixed costs/share of margin in revenue), 1000 rubbles	89297.43	94031.37
<b>Profitability threshold</b> (tons)	6459	6914
<b>Safety margin</b> ((revenue-profitability threshold)/revenue), %	45.7	42.3

Operating leverage for the firm has quite moderate value in both periods (if the firm will raise sales (output) on 1%, profit will increase only on 2,18% (2,37%)) that, together with high value of safety margin, points at effective management of production and states about quite high utility of assets of the enterprise. Though, situation worsened some in 2000, even though they enlarged output, mostly because of fall in fish price, as purchase of a vessel (that considerably increased enterprise assets tax value) and increase in borrowed capital and according to that interest on credit that increased fixed costs. The purchase of the new fixed assets was made in the end of the year 2000, so amortisation for it was not discounted that positively influenced operating leverage as it is strictly depends on capital coefficient (or how much of fixed assets value falls on each unit of a product). Thus, the forecast for the next year is that operating leverage will increase and safety margin decrease as the purchase of new fixed assets increased value of fixed costs but did not provide a growth of productivity (as it was vertical integration that can only give an economy on raw materials and change structure of short-term liabilities).

### 4.3.2. Labour productivity analysis.

Calculations of labour productivity specific for our enterprise is presented in the table:

Table 4.12. Main indexes of labour productivity at the enterprise.

	1999	2000
Revenue, 1000 rubbles	164332	162875
Output, tons	11887	11976
Labour costs, 1000 rubbles	20994	21074
Share of labour costs in total costs	17.49	17.04
Number of workers	342	376
Labour costs per worker, 1000 rubbles	61.39	56.05
Number of hours of effective labour	1580	1567
Output per hour, 1000 rub	104.01	103.94
Output per worker per year (1000 rub)	480.5	433.2
Output (tons per hour)	7.523	7.643
Output (kg per worker per hour)	22.00	20.33
<i>Same for the whole processing Industry of Murmansk area</i>	20.92	21.11
<i>Same for Norwegian processing industry</i>		625.50
Labour intensity (hours per a ton)	0.000	0.000

The productivity of labour in the company is exactly on the same level as labour productivity in Murmansk area and much less (about 30 times) than in Norway. Moreover, it reduced in 2000 because of the relative height of increase in number of workers over the increase in output on the ground of vertical integration.

#### Conclusions from analysis:

The same level of productivity of labour in Murmansk area and at our enterprise points at the same technological level there but significantly lower assets turnover shows low average utility level of assets in Murmansk area (value of capital coefficient for the area is three times bigger than its value for the enterprise). Though higher assets turnover in Norway, given the situation of lower profit rate per unit of a product (sales profitability), is reached on the ground of higher technological level of assets and, therefore, their higher productivity (20% lower capital coefficient than in the company).

The higher return on assets (which is the main index of operating that shows competitiveness level) in the firm is achieved, as it was mentioned before, by high



value of return on sales because of higher profit rate per unit of a product on the ground of:

- in comparison to Norway: 1). lower costs because of cheaper inputs, mostly material (price of raw fish, which is about 1.7 times less than in Norway, energy etc., figures 4.3, 4.4), even though the labour productivity is much less, labour costs do not exceed Norwegian ones much because of much lower wages rate in Russia (figures 4.3, 4.4).  
2). Higher price level of fish (that will be discussed hereafter).
- in comparison to Russian average: 1). lower costs because of more efficient production management (low value of operational leverage and high value of safety margin) that gives smaller share of fixed costs in total costs. It is achieved mostly on the basis of good assortment policy and high utility of assets on the ground of regular supply with raw materials and elimination of unused assets.  
2). Same price level (little bit lower though, figure 4.2).

#### 4.4. Herring production by the company.

As it was mentioned before, herring of different types of processing is one the most important items of production of studied company (it accounts about 20-30% of the revenue). Therefore, the price of this fish affects in a great measure financial results of operation of this enterprise.

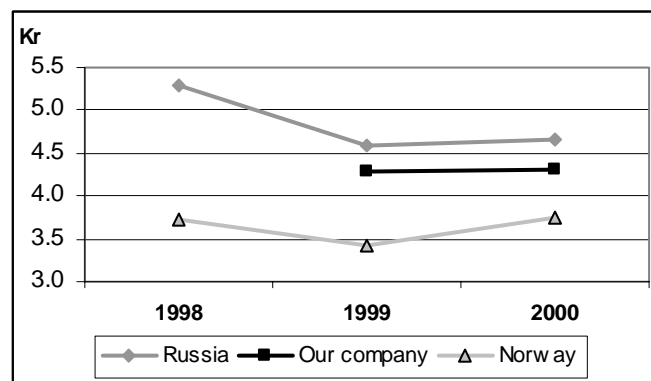


Figure 4.2. Average net FOB price of herring (without VAT) of all types of processing sold by the company, in comparison to average Russian (in Murmansk area) and Norwegian producer prices of herring.

Main economic indexes for herring production by the enterprise under consideration is shown in the table:

Table 4.13.

	1999	2000
Share of herring in sales, %	26.4	25.1
Revenue from herring sale, 1000 rubbles	43383.6	40881.6
Price per kg of herring, rubbles	13.35	13.74
Tons produced	3248.8	2975.9
Variable costs, 1000 rubbles	17836.11	16932.83
Fixed costs, 1000 rubbles	13860.79	13442.81
Total costs, 1000 rubbles	31696.9	30375.64
Financial result, 1000 rubbles	11686.7	10506.0
<b>Return on Sales, %</b>	<b>17.5</b>	<b>16.7</b>

The cost structure of herring production by this company (figure 4.3, 4.4) is quite similar with total fish production cost structure on the ground of a fact that fixed costs, which can not be referred to any particular production, are charged proportionally to sales volume of every processed species.

#### 4.4.1. Comparative costs of production of herring.

Method of compartition of costs into four main elements (labour, materials, amortisation and other costs, which consist mainly of management costs and taxes) used here is quite visual and gives an opportunity to reveal easily the major difference in production costs of Norwegian and Russian processors (figures 4.3, 4.4).

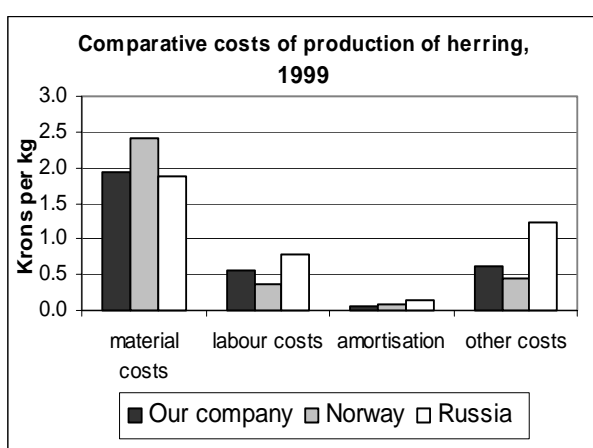


Figure 4.3.

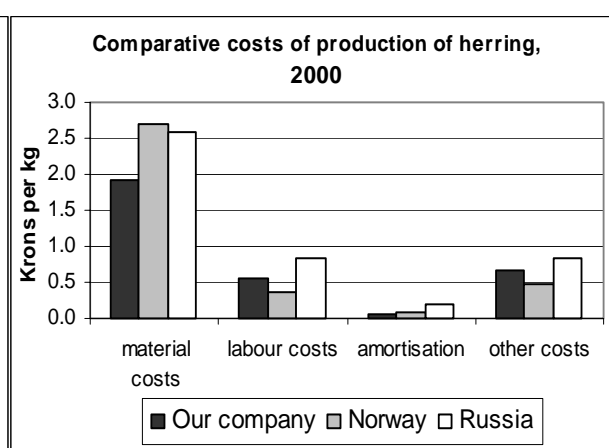


Figure 4.4.

The material costs per unit of output, which are the biggest share of total costs of production, are higher for Norway that is quite reasonable given the situation of

cheaper Russian inputs, mostly basic materials (raw herring, which is about 1.7 times cheaper for Russian producers) and energy, that are two main costs components, making about 80% of material costs. Increase in value of material costs for the whole Russian processing industry in 2000, given the situation of stable level of material costs for a single producer, points at ineffective organisation of production within the industry. Generally, material costs is the major element of saving of expenses of Russian processors in comparison with Norwegian producers.

The excess of Russian labour costs (in both cases) over Norwegian ones in view of the fact of lower wages in Russia (about 12 times difference) points at extremely low productivity of labour in Russia (that was discussed earlier). The overshoot of labour costs per unit of product in the whole Russian industry over labour costs at the enterprise under consideration, given the situation of absolutely identical labour productivity per worker and average wages in both cases, points at excessive workforce in herring processing industry of Murmansk area.

The second possible element of cost saving for Russian producers is amortisation component of costs of production due to the lack of investments into new productive assets and, therefore, use of old assets of lower value. Exceeding of amortisation value for Murmansk herring processing over Norwegian one (and, so, over amortisation component at the considered enterprise) indicates an excess of production capacities and, therefore, demonstrates low utilisation factor of facilities in the industry.

The higher value of “other costs” item for Russian producers can be explained mostly by big share of management costs, which consist mostly of costs on sale and advertising, on the ground of poor management skills of Russian administrative staff and bad logistics infrastructure. Higher value of this item for Russian processors in comparison with considered company could be explained by high commercial costs (repaying of credits with interest) for the industry, as they were not large for the company. Its positive fall for the industry in the year 2000 could be caused by decrease in average weighted credit interest in Russia on 15.3% (from 39.7% to 24.4%).

Therefore, such two main factors as advantage of cheaper inputs (including labour) and use of old fixed assets (even though they are much less productive) give to Russian processor an opportunity of saving of expenses and, hence, competitive advantage over herring products imported from Norway (figures 4.5,6). So, Russian

producers, having the same return on assets as Norwegian ones, can fix price on lower level (for instance in 1999 and 2000 they could set price respectively on 3% and 7% less than average Norwegian price for herring during that period still having the same return on assets as Norwegian producers, who sell herring to Russia) or have higher ROA, setting the price on the same level (in 1999 and 2000 they could get respectively 2.7% and 6.7% higher ROA fixing the price on the same level as Norwegian producers).

Though, as Russian practice shows, it works only on micro-level but not for the whole industry, because of the presence other than economic regulators of the market.

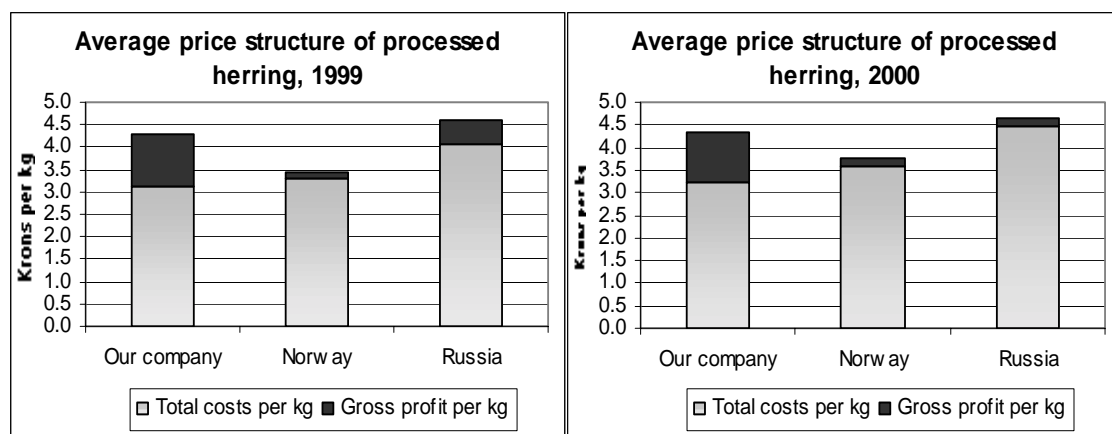


Figure 4.5, 4.6. Price structure of processed herring sold by producers for Russian market (without 20% VAT for herring produced by Russian processors and 10% VAT + 10% import tax + transportation costs for imported fish).

But as we can easily see from figures 4.5 and 4.6, there should be other factors than costs volume that influence the process of price formation and define the final producer price of herring. These factors can be divided into two main groups: marketing strategy of particular fish producer and influence of Russian market mechanism.

#### 4.4.2. Pricing.

The main price method that is used by the firm under consideration is pricing on the base of full costs of production (that define minimal price, which enterprise can request) and going-rate pricing (that define maximal price as these prices already show the balance between demand and supply on the market). At that the gained

profit rate is analysed, compared to the normal profit rate in the industry, credit interest, average rate of return on assets and then final price rate is set.

Considering such a remarkably high values of return on sales and assets turnover for the studied firm in comparison to the average in the industry (that was calculated earlier) the enterprise has the incontestable advantage based on lower full and marginal costs of production. Therefore, in order to attract customers, firm sets the price on the lower limit of market prices in Murmansk area (figure 4.2). This strategy gives some opportunities, such as availability of stable custom and their interest in keeping this firm as the main fish products supplier. It results in high rate of turnover of debts receivable and, thus, shorter operation cycle and, as well, additional capital for the company (as rate of turnover of trade liabilities is much lower).

In order to estimate the minimal possible limit of price of a product that will cover all expenses of a firm, it is necessary, as it was mentioned before, to estimate full costs of production and sales of every particular product including optimal profit rate for applied effort and risk. For this purpose all costs will be divided into two main modes: 1). accountant's expenses of production and realisation of a product (that are included into prime cost of fish and form financial results that are considered for taxation), which were calculated and analysed before, and 2). economic costs of production and realisation of a product, which determine price of an offer (our minimal price), are costs associated with simple and expanded reproduction in the industry (Slepneva, 2001). Economic costs include accountant's costs and normal profit of the enterprise.

Thus, in order to evaluate minimal producer price limit, an analysis of economic costs of the enterprise will be conducted.

Major economic cost items, which have the maximum weight in cost structure, are shown in the table:

Table 4.14.

<b>Main economic cost items of the enterprise</b> (1000 rubbles)	<b>1999</b>	<b>2000</b>
<b>1. Accountant's costs</b>		
1.1. total accountant's costs (prime costs of fish) of an enterprise	120059	123664
1.2. accountant's costs of herring production	31696.9	30375.6
1.3. share of herring costs in total accountant's costs, %	26.4	24.6

<b>2. Normal profit of the enterprise</b>		
2.1. costs covering normal (regular for the industry)		
Expanded reproduction, i.e. capital investments		
Into fixed assets, about 1% from fixed assets value	317.3	683.6
And increase in working capital, about 1% from their value (according to production growth plan)	664.46	433.6
2.2. R&D costs (covered by profit)	43.2	31.4
2.3. housing construction costs	1020.6	950.3
2.4. current outlays for social needs, financed from profit	330.4	258.8
2.5. staff training costs, financed from profit	35	84
2.6. transfers to the centralised funds	0	0
2.7. reception of foreign experts	41	54
Alternative costs:		
2.8. labour costs that are not included in prime cost of fish (stipulated by personal participation of cooperative participants as average wage in the industry was higher)		
	3521.4	3848.1
2.9. loss of opportunity (of use of owners capital in different way)	0 *	0 *
2.10. influence of inflation**		
on amortisation (revaluation of fixed assets value is held Every third year)	719.1	447.4
on loss of circulating capital (that part, which was not Compensated by increase in price)	2331.6	1094.8
2.11. Value added tax (is not included into calculations as all data Regarded price is not include VAT)	0	0
2.12. Total costs (normal profit)	9024.073	7885.981
2.13. Normal profit plus profit tax (35%)	<b>13883.19</b>	<b>12132.28</b>
2.14. Normal profitability rate of the enterprise (normal profit/prime costs of fish), %	<b>11.56</b>	<b>9.81</b>
<i>Average normal rate of profitability of an enterprise in the industry (proportionally to prime costs of production (for comparison)) ***</i>	10 %	10 %
2.15. Share of normal profit that goes to herring production (proportionally to its cost share in prime costs of fish)	3665.16	2984.54
<b>3. Total economic costs of herring production (1.2.+2.15.)</b>	<b>35362.06</b>	<b>33360.14</b>
4. Herring output, tons	3248.84	2975.89
<b>5. Minimal price (3/4), rubbles</b>	<b>10.88</b>	<b>11.21</b>

\* See table 6 (government bonds yield is much less than return on owners' equity)

\*\* Inflation rate in Russia came to 36.5% in 1999 and 20.2% in 2000

\*\*\*Karlik, 2001.

Considering that maximal price of herring that single producer can get on the market is determined by the demand and appears as the market price, maximal price of herring, that our company can ask for, is the price, which is considered here as “Russian price” (figure 4.2). Therefore, possible range of herring prices for our company in Murmansk area and position of chosen by the enterprise herring price in relation to this range is shown on the figure:

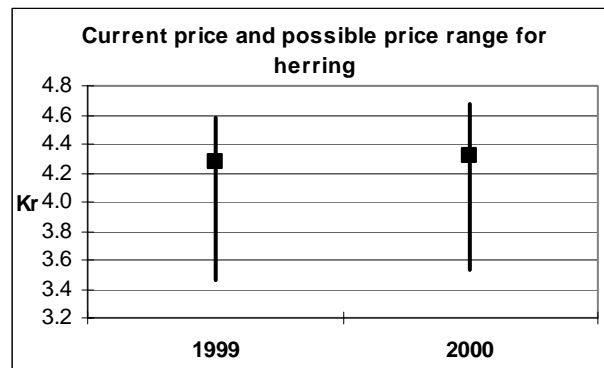


Figure 4.7.

Thus, having such low accountant’s and economic costs of production in comparison to the average in the industry, the company has quite wide range of possible prices for final decision making and so, the variety of possible pricing strategies. As it was mentioned earlier, the enterprise chooses the strategy of “going-rate” pricing, which is pricing on the ground of current market prices (prices of competitors), paying less attention to consumer demand and own costs of production (also because they are still much less than the average). Thus, managers of the enterprise set a price on the level below its main competitors (Nord-Vest F.K., Murmansk Rybokombinat, OAO Sevrybkhodflot, etc.), presuming that they are keeping the balance in the sector network by doing that and at the same time keeping their regular customers and attracting new ones.

But as any strategy, application of this strategy has its shortcomings also. The main from them is that following this strategy, the enterprise should constantly conduct analysis of prices, their trends and quality of competitor’s goods. In doing so, the producer of a good should not only to have price information about products of a competitor but also to accurately examine their technical-and-economic performance in order to conduct comparative analysis.

*Quality:*

Production of herring in the territory of Russian Federation is a subject to the obligatory certification, which is carried out by the Gosstandart (the State Authority

responsible for certification), and is regulated by Federal Laws and Government regulations. Complying with the internal quality regulations, processed herring produced by Russian processors, has quite uniform quality and there are no notable distinctives for each herring product type produced in Murmansk area (Chakolina, 2001). At the same time Norwegian herring imported in Russia, complying Russian standards, has some additional qualities conditioned by different processing techniques applied in Russia and Norway (especially packaging technique). For instance, herring imported from Norway is considered to have longer storage period that is an advantage for whole-sellers.

#### 4.4.2.1. Prices of competitors.

It is quite important to analyse firm's response to possible change in price of competitors. There is a strong evidence, that was discussed in chapter 2 of present paper, that shows difficult state of Russian processing industry (that was mathematically proved by analysis of costs of production in Murmansk area held in chapter 3) and inability of most Russian processors to reduce significantly costs of production and so the price (at least in a short run). Besides, the company under consideration has high value of safety margin, which shows that the company can stand more than 40% revenue reduction without falling into losses. From the other hand, traditionally strong demand for herring in Russia, scarcity of marine resources and state of Murmansk fish market also evidence about small probability of considerable drop in herring price.

Therefore, taking into consideration all said above, it can be concluded that our enterprise has chosen quite successful price strategy for herring products and commodity composition of production (big share of herring production) given current economic characteristics of the company and situation in processing industry of Murmansk area.

#### 4.4.2.2. Issues of price formation on Norwegian herring products on the post-production stage.

Results of various researches (mostly informal) conducted for the Murmansk fish market show that price of herring products imported from Norway is usually on the upper level of Russian wholesale market prices range (according to data obtained from Murmansk Statistical Bureau) and so, significantly higher than FOB producer



prices for exported from Norway herring. It can be explained by generally recognised high quality of imported herring (especially salted) that gives an advantage to foreign fish products, which is used by fish sellers, who, using the method of going-rate pricing, compare fish quality with the same parameter of herring sold by competitors. Such a big difference between FOB price in Norway and initial price of Norwegian herring on Murmansk market is mostly explained by high delivery costs of herring from Norway in Murmansk area. Unfortunately there were no special market research in Murmansk area in order to evaluate the preferences of wholesalers or, in other words, estimation of their willingness to buy either Russian or Norwegian herring. Though, results of personal informal interviews with fish sellers and competent opinion of some experts (Sidorov, 2000) point at shifting of preferences to Russian herring. There can be several possible reasons of such behaviour of Russian wholesalers:

- High transportation costs that result in high initial price of herring imported in Murmansk (CIF price), which can be even higher than average Russian producer price.
- Higher risk associated with transportation.
- Lower turnovers of some Norwegian herring products for Russian sellers that can be caused by less demand on these products in comparison to Russian herring products on the ground of higher price, as price is the major factor influencing the demand in Russia today (especially on cheap range of products such as herring)
- Absence of effective marketing arrangements in Murmansk area that pushes producers and wholesalers to set up direct contacts with each other, leads to logistical confusion and compromises quality as the valid regulations are difficult to apply (Chakolina, 2001).

All mentioned above restricts the maximal possible producer price limit for Norwegian herring sold to Russia, and hereby, limits a growth of return on assets (ROA) index and keeps it on such a moderate level (5-6%).

Therefore, Russian effectively operating companies (such as the company under consideration), which use the advantages of cheaper Russian inputs, and so have lower costs of production, and retrenchment on the ground of the absence of transportation expenses (that shift the maximum possible price limit further up in comparison to the maximum limit for Norwegian producers), have an opportunity to

get much higher return on their assets and, thus, more resources for further development of production.

## Conclusion.

The results of the conducted analysis can be briefly described as follows:

The comparison of Russian and Norwegian herring processing industries shows that there is much higher level of production costs in Russian processing industry than in Norwegian one (figures 4.5, 4.6). The main reasons of the situation are:

- Much lower level of labour productivity (about 30 times), that leads to situation when given 12 times less average wage level in Russia, Russian processors still spend more on labour on the ground of old inefficient technology use, excessive labour force in the industry and overall low standards of it.
- Use of old fixed assets and extremely low utilisation factor, that even given their cheaper value in comparison to Norwegian ones, leads to bigger level of depreciation costs per unit of a product in Russian processing.
- Higher level of normal profit rate in Russia.
- Higher bank and commercial credit rate in Russia on the ground of macroeconomic situation that leads to bigger financial costs in the industry.

All mentioned leads to the situation when even having cheaper material inputs (Appendix 4, fig.4), Russian producers have bigger total costs of production than Norwegians do, higher normal profit rate, which is peculiar for Russian processing, and, therefore, higher level of added value. Thus it causes the situation of higher Russian producer price per unit of the product (*First precondition for hypothesis substantiation*).

The microlevel analysis of the situation on the example of a single fish processor in the area gives following results:

- It shows that, even given the situation of the same technical and technological level of operating (which is quite similar with specific average level for the whole local processing), and similar level of labour productivity, it is still possible (and quite easy) to have smaller production costs and so more competitive advantages for a single processing company (*second precondition for substantiation of the hypothesis*). Such a retrenchment can be achieved mainly on the ground of 1). cutting of excessive workforce, 2). increase of utilisation of fixed assets by working-out production strategy and on the base of that to retire unused assets, having stable supply with raw materials, 3). improvement of management of the

enterprise for the sake of reduction in management and financial costs and working out effective production policy.

- The financial analysis of the enterprise activity showed that the enterprise had stable financial state in 1999 (high rate of liquidity that is a good precondition for investment possibilities into the company for technology renovation) and very high return on assets for the industry that could be also used for investments into new modern high productive assets. But instead of using these opportunities for investments into new productive assets and therefore, reduction of production costs, the company preferred to make vertical integration by purchasing a fishing vessel (integration with supplier) that significantly worsened its financial state and increased production costs (*third precondition for substantiation of the hypothesis*).

All above-listed factors manifest that processing enterprises of Murmansk area are not interested in development of production and do not use opportunities of costs reduction for the sake of getting higher profits. The great number of operating making-loss companies in the industry points at other than market regulators of economy. Moreover, enterprises, in their attempt to get profit rather increase the price of a product than reduce costs. It leads to the situation when all of them act as one market monopolist, who can dictate prices. Such a “producer’s market” situation is the main reason for non-updating of the production and existing of gradually increasing gap in labour productivity and quality between Russian and foreign products, that was described in the paper.

Thus, there is no such market motivation as competition for fish processing companies on the Russian market, that would push them to decrease costs of production in order to get competitive advantages. This can be only explained by the presence of external mechanisms of regulation of firm’s activity, which are used by the state. Usually the absence of competition or unequal conditions of it are caused by tendencies of authorities to solve social problems that emerge in the region, such as dissolution of processing enterprises and, consequently, unemployment. Processing is the dominant urban element in the area, which provides majority of jobs. The local authorities grant inefficient enterprises with privileges for account of federal budget, usually in the form of tax exemptions, allocations of cheap credits or relief of a part of energy costs. Thus the most efficient companies (like a company under consideration) can not win bigger market share, usually on the ground of shortage of investments (in

our case on the ground of the lack of raw materials, as supply of the industry with raw fish reduced significantly over last ten years, and number of fish processing companies did not decrease in the same extent). Therefore, the most efficient enterprises can not achieve sufficient amount of investments to provide reproduction on an enlarged scale or at least more productive (and so less cost-based) processing.

Such policy that is worked out by the Government and local authorities in order to achieve some social goals, actually is the main obstacle to normal development of market economy in Russia. This stops the development of scientific and technological progress on the enterprises and so, the growth of labour productivity.

These problems are incident not only for processing industry but for the most of Russian production. It leads to the situation when Russian producers having so high costs of production can not compete with imported foreign products (especially from countries with cheap labour force such as China, Turkey and so on) that causes the worsening of already bad economic state of production enterprises. In case of fish processing of Murmansk area, bad financial state of enterprises and related shortage of circulating assets leads to delays in payments for raw materials, which is one of the reasons that pushes Russian fishermen to deliver fish in Norway and other countries, building up their fish processing industries. So the state should change its policy in order to provide conditions for forming of real competition on the market as the made by the firms decisions are based on decisions made by the government.

To overcome this situation and to construct a normal market economy, a multilateral system of measures is needed. The measures would have to:

- overcome the institutional gaps in the market mechanism;
- create macroeconomic conditions (and the presence of competition is the main one) that ensure the increase of profitability of the processing enterprises;
- activate the efforts of the managers and collectives to overcome the situation, including using programs of restructuring processing enterprises, increasing applications of the bankruptcy law, training, and partially, replacing the enterprises' management.

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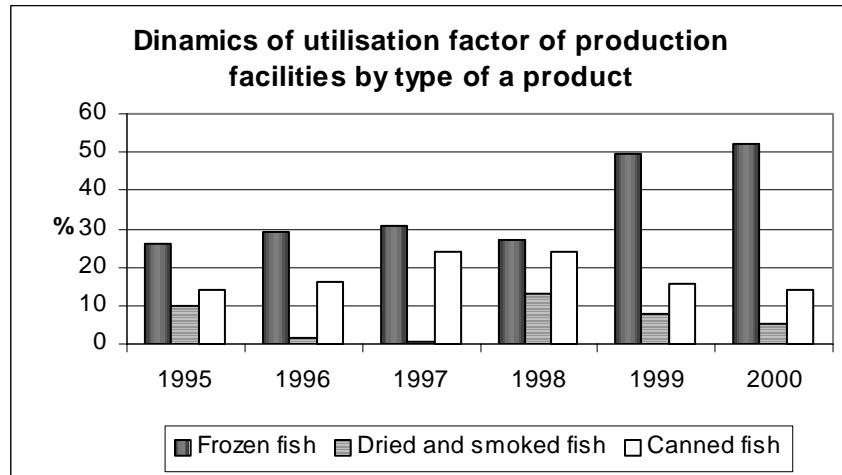
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## APPENDIX 1.

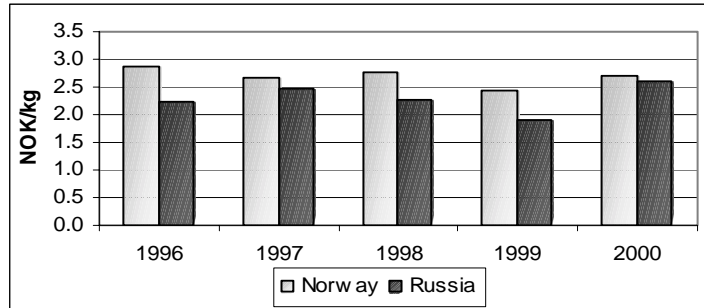
*Dynamics of utilisation factor of production facilities by type of a product.*



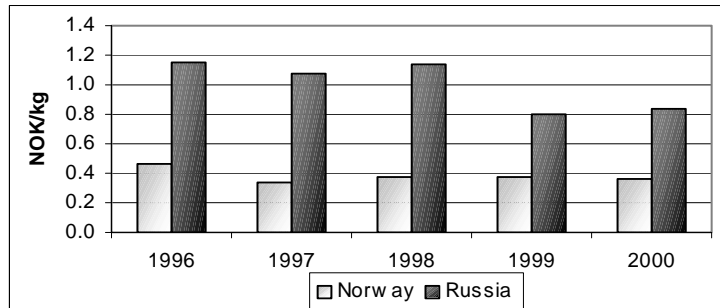
## APPENDIX 2.

*Comparison of main elements of herring production costs in Russia and Norway.*

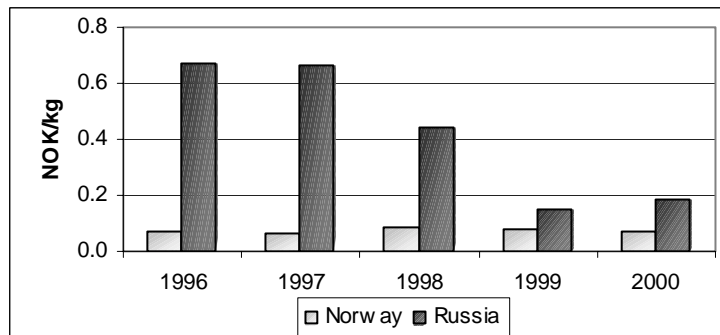
### Material costs.



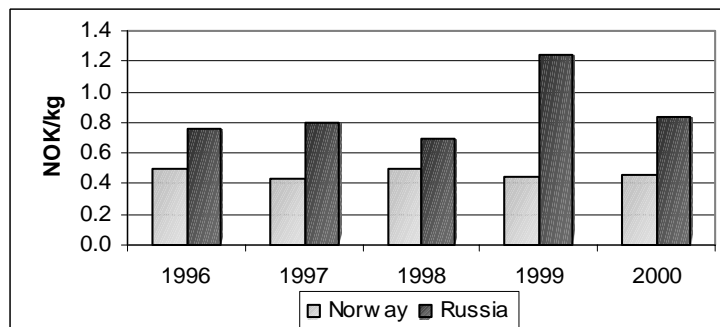
### Labour costs.



### Amortisation.



### Other costs.



### APPENDIX 3.

#### *Taxes of Russian Federation.*

tax	taxpayer	object of taxation	rate
<b>Federal taxes:</b>			
<b>VAT</b>	Legal persons, performing production and other commercial activity	Sales volume of production and public services when they are sold in Russian Fed Importing goods	20 % 10 %
<b>Profits tax</b>	Legal persons	gross profit	13% in federal budget up to 22% - in regional budgets ( so max 35%)
<b>Capital levy</b>	Organisations and natural persons, getting income in form of dividends and procents	Divident, procent income	dividents - 15%, procents on securities - 12%
<b>Single social tax</b>	Employers making payments to employees	All payments to employees from employer	Pension fund - 28% Social National Insurance scheme - 4% Health insurance fund - 3,60 %
Excises Security transfer tax Income tax on individuals State tax Customs duty Allocations for the restoration of the raw materials base		Value or amount of excisable goods Value of issued securities	0,80 % minimum 12%, maximum 35%
Ecological tax Water tax Tax for use of animal kingdom objects and water biological resources Payments for the natural resources use			1.7-10%
<b>Regional taxes:</b>			
<b>Enterprise assets tax</b>	Legal persons, filial agencies and other profit-and-loss centers, foreign legal bodies and their subdivisions in RF, which have assets in RF	Fixed assets, intangibles and goods that are kept in an account of an enterprise	up to 2%
Property tax Transport tax Road tax Sales tax Gaming tax		Real estate value Amount, type and capacity of vehicles Sales value of production and public services Sales volume	1 % up to 5%
<b>Local taxes:</b>			
<b>Tax on land</b>	Organisations including international, non-governmental, foreign legal bodies	Land regardless of way of use	Vary in accordance with way of its use, location, historical value
Personal property tax Advertising tax Inheritance and gift tax Local licence fees		Inventory value or capacity	up to 2% up to 5%

**APPENDIX 4.**

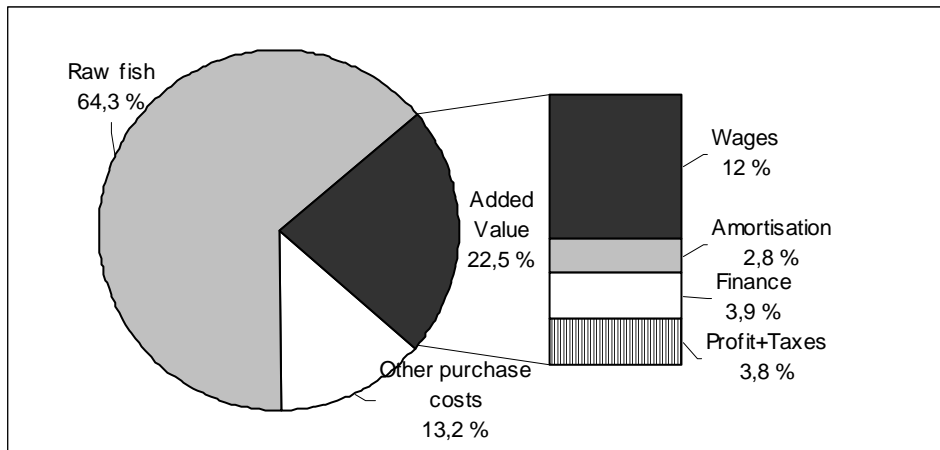


Figure 1. Average structure of producer price of herring in Norwegian processing industry in 1999.

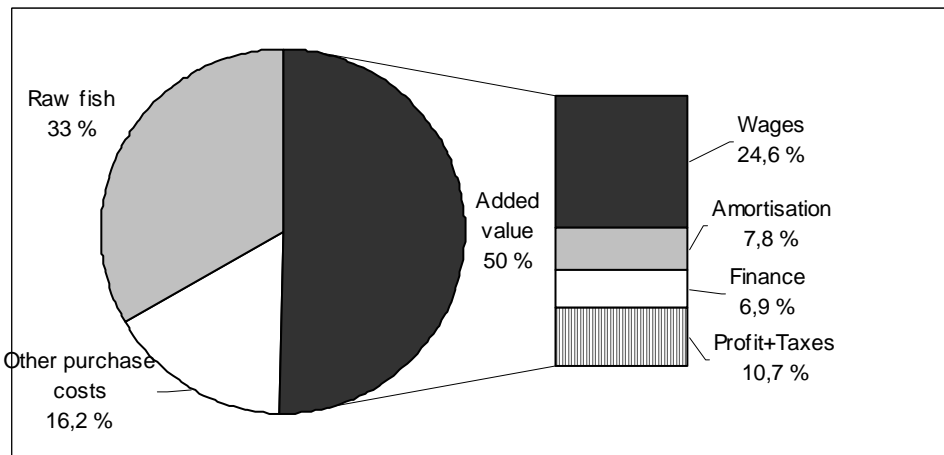


Figure 2. Average structure of producer price of herring in Russian processing industry in 1999.

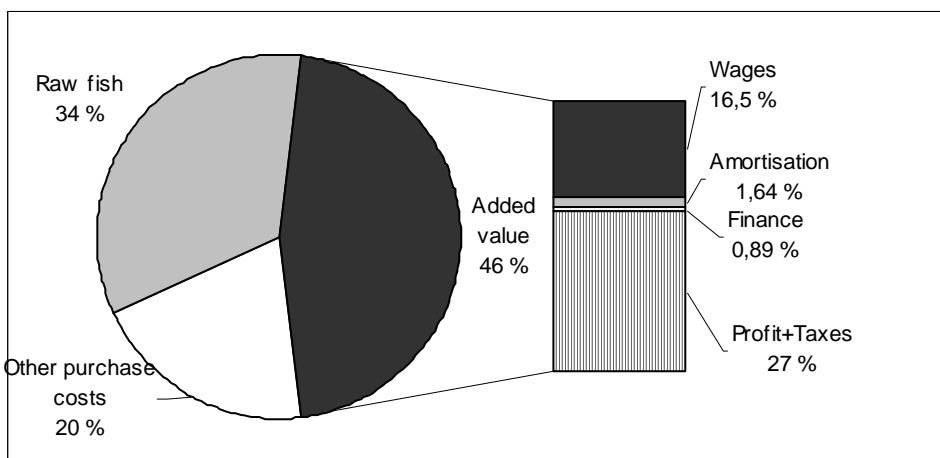


Figure 3. Structure of producer price of herring at the considering Russian enterprise in 1999.

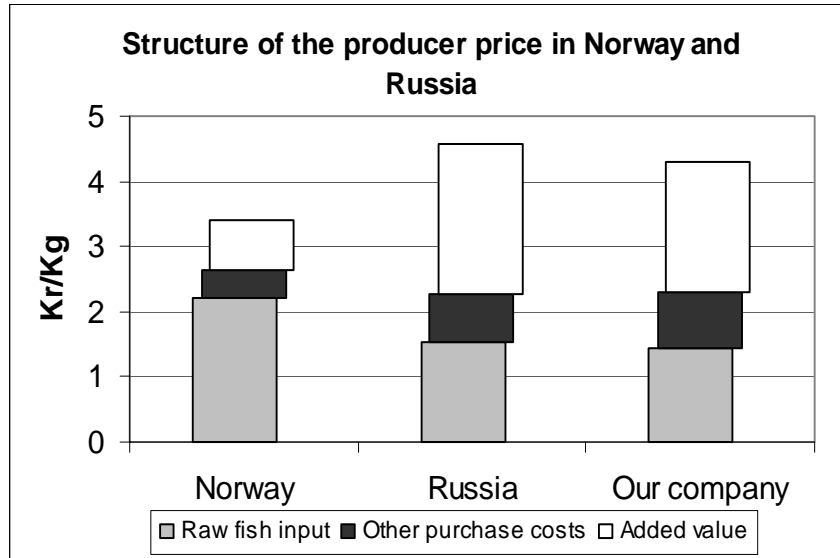


Figure 4. Structure of producer price of herring in Norway and Russia in 1999.