RAW MATERIALS VS. FINISHED GOODS: VALUE ADDED AND GOVERNMENT POLICY

by

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Also I would like to thank KSE professors for providing guidance and sharing valuable advices which helped us to constantly improve our knowledges and stay strong.

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SFS State Fiscal Service of Ukraine

SSSU State Statistics Service of Ukraine

USDA US Department of Agriculture

GDP Gross Domestic Product

MY Marketing Year

EXECUTIVE SUMMARY

The main focus of the paper is the analysis of the efficiency of exporting finished goods of agricultural sector of Ukraine, precisely wheat as opposed to raw materials. Ukraine is among the top three world leaders in grain exports. However it has much lower ranking in terms of trade in flour products.

How much more profitable would it be to export value-added products, i.e. processed products?

There is an opinion dominating in the expert environment that it is not agricultural raw materials that should be exported but finished agricultural products.

Given that Ukraine stands as a reliable trading partner of global food security, it is an important issue to investigate.

Paper aims to check whether the sale of agricultural raw materials is actually more effective and in which specific commodity items.

The research focuses on grain products, specifically as an example of a raw material wheat is chosen, as an example of a finished good – flour. These were chosen specifically as they are one of the most significant goods from the social perspective.

That is why industry analysis and trends, as well as the process of value added of the technological chain "wheat-flour" from growing raw materials to selling and exporting finished products is relevant.

CHAPTER 1. INTRODUCTION

1.1. Introduction

Exports of agricultural products are responsible for a substantial share of Ukraine's GDP.

Ukraine is one of the major exporters of grain. Ukraine has the great potential of increasing grain exports.

In the previous year Ukraine was the second in terms of exports of all grain crops, ahead of only the United States.

According to the State Fiscal Service of Ukraine as of February 22, Ukraine exported 31 million tons of cereals and legumes. In particular, 13.3 million tons of wheat were exported, of which 8.9 million were food wheat, which is 67% of total wheat exports1.

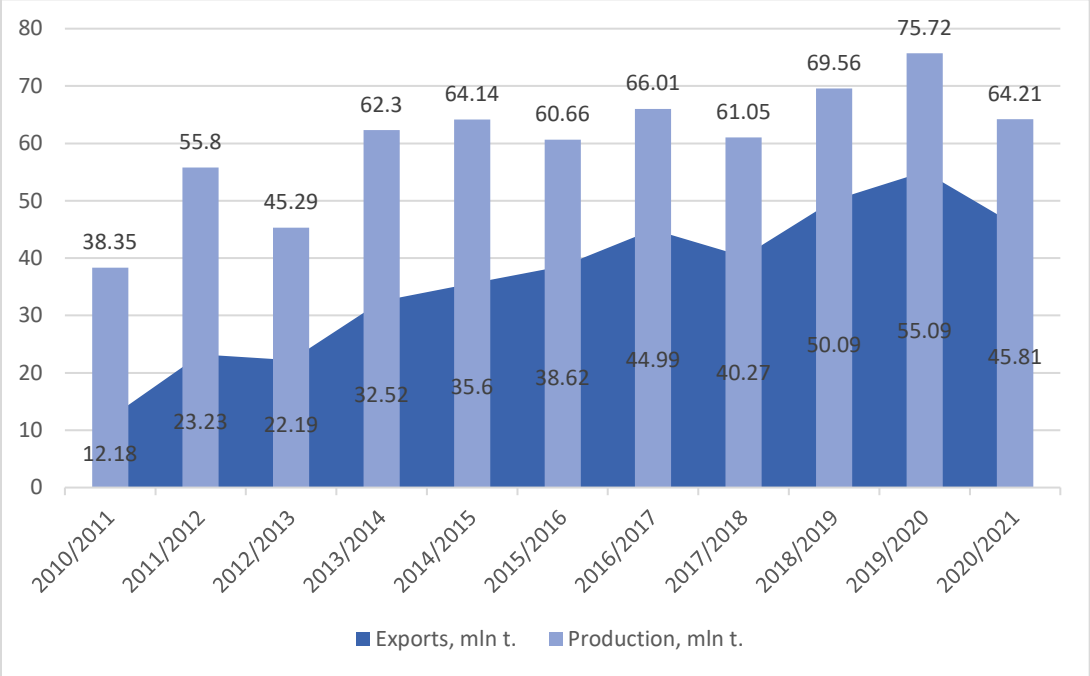
Over the past 10 years, Ukraine's grain exports have significantly increased. It has set a record: increase in grain exports to 56.7 million tons in 2019 which were exported to foreign markets. This is 4 times higher than in 2010.

According to the National Research Center "Institute of Agrarian Economics" the total growth of Ukrainian grain exports in physical terms led to its highest value in the history of Ukraine - 9.6 billion dollars. Wheat exports also became the highest since independence - 20.0 million tons[2].

[1] https://www.me.gov.ua/News/Detail?lang=uk-UA&id=656c7808-b12e-44b3-824c-2894b65ed5d3&title=TempiEksportuZernovikhKulturVidpovidaiutZaplanovaniiDinamitsiZaMemorandumom

[2] http://www.iae.org.ua/presscentre/archnews/2753-2019-roku-u-top-10-importeriv-ukrayinskoho-zbizhzhya-vpershe-zyavylas-turechchyna-mykola-puhachov.html

Figure 1. Grain Production and Exports of Ukraine, mln t.



Source: USDA

As reported by the Ministry of Economic Development, Trade and Agriculture provided that the current rate of exports in the current marketing year will be maintained, Ukraine is about to reach the indicators specified in the Memorandum of Understanding on the grain market. However, currently, 76.1% of the planned wheat is exported.

The forecast of the wheat production in 2021 will exceed 27 million tons, of which 8 million tons will be used for domestic consumption[3].

3 https://agrotimes.ua/magazine_number/the-ukrainian-farmer-93/

This means Ukraine produces three times more wheat than it needs. To keep it is a high risk of spoilage and a decrease in the domestic prices. Traditionally the surplus is exported and is a significant source of currency in the country.

As the agricultural sector is highly dependent on weather conditions there is a danger of yield reduction.

However, for the inner market, such fears are unlikely to be justified. Domestically, what is most in demand among cereals. Its production in Ukraine has been growing steadily for the last 5 years.

Domestic wheat consumption is about 8 million tons per year, so it is difficult to imagine that the production would not cover domestic needs.

Thus, in the worst-case scenario - with the harvest reduction by one-half there is a surplus of grain, which can be and should be exported.

The motivation for the research lies in the aspect of the current news on the topic as well. On the October, 11 three industry associations of the Ukrainian grain market withdraw their approvals of the Memorandum of Understanding on the maximum volume of grain exports in 2021/2022[4].

The signatories of the letter explained their decision to withdraw the approvals by the fact that during the working meetings to agree on an annex to the memorandum defining the maximum export volume of Ukrainian wheat in 2021/22 MY, their position was ignored, which thus completely eliminates the provisions of the signed memorandum.

[4] https://ua.interfax.com.ua/news/economic/772897.html

Therefore, I would like to show with my model calculations under what conditions the restriction of wheat exports will help flour mills.

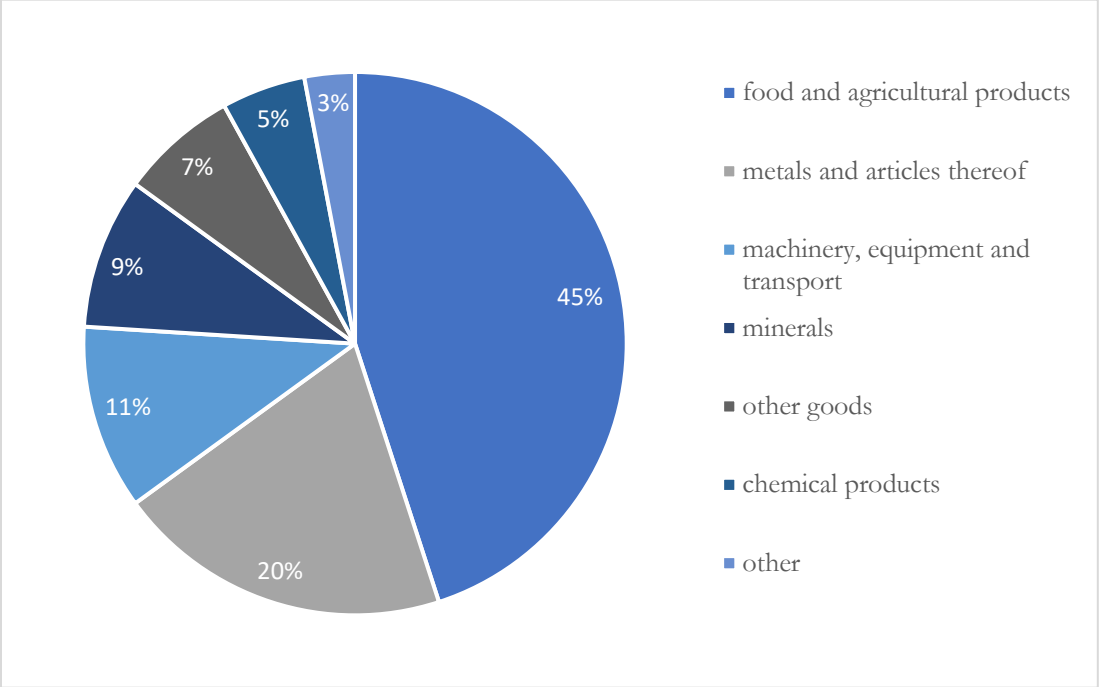
That is how much it is necessary to reduce the cost of wheat for flour mills so that they become competitive compared to wheat exports.

CHAPTER 2. INDUSTRY OVERVIEW AND RELATED STUDIES

2.1. Introduction

Ukrainian agricultural market accounts for the largest share of our country's exports, namely 45%, as can be seen on the following figure.

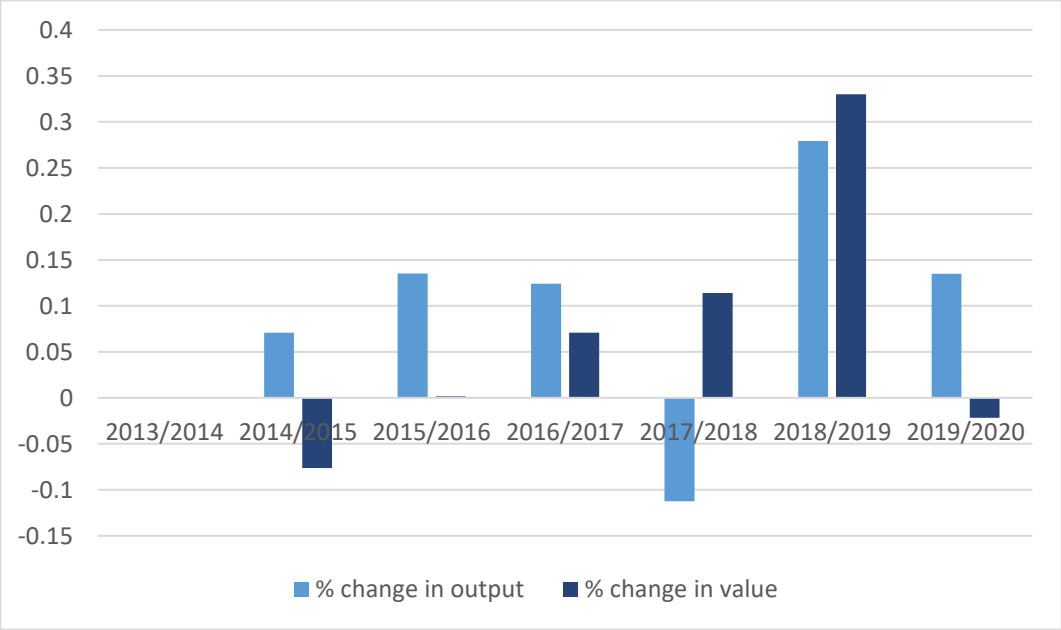
Figure 2. Structure of Ukrainian exports



Source: data of the Ministry of Agriculture of Ukraine

The grain market is one of the largest in terms of amount produced and profit. The following figure describes the dynamics of percentage changes in the exports of grain an its value throw-out 2013-2020 years.

Figure 3. The Comparison of the percentage changes in grain exported and its value, 2013-2020



Source: Calculated based on the data provided by the Ministry of Agriculture and SFS

Looking in retrospective, by the end of 2013/2014 marketing year, Ukraine supplied 32.5 million tons of grain for $ 6.56 million. In the next year exports of grain increased by 7.1%. However, the value has decreased by 7.54%.

During 2016-2017 there was a consecutive increase in the amount of grain sold by 13% on average with a substantial increase in the value – by 7.1%. It was followed by a drop in the volume of exports by 11.3% to 39.4 million tons in 2018, however its value increased by 11.38%.

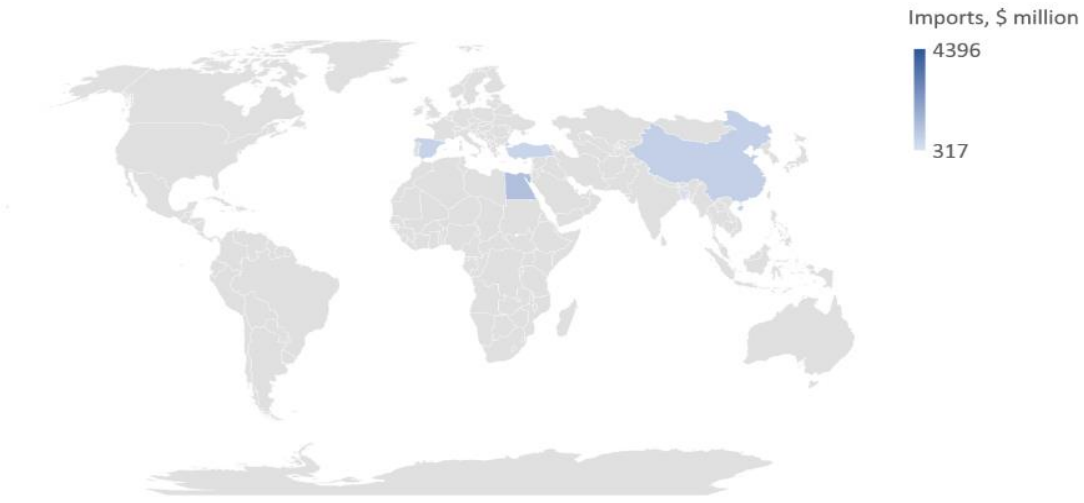
In the 2019 Ukraine there was an unprecedented increase in the amount of grain exported to foreign markets – by 28% up to 50.4 million tons. During the last year, Ukraine the trend continued as Ukraine sold 57.2 million tons which is a 13.5% increase.

2.2. Key Partner Countries

As Ukraine is one of the major players in the global agricultural market, there are more than 190 countries that buy Ukrainian products. In the grain market the largest buyers of Ukrainian grain are the countries of Asia, Africa and Europe. In the previous years there was, however, a significant change in the major importers of Ukrainian grain. Specifically, such countries as Turkey, Bangladesh and Israel were added.

There are some countries that remain constant importers of Ukrainian grain, such as Egypt, which bought 97% more Ukrainian grain in 2019 in comparison with 2018 up to $ 1.3 billion.

Figure 4. Major buyers of Ukrainian grain, 2019



Source: created based on the data of Institute of Agrarian Economics

Another major importer of Ukrainian grain is China. It has increased its imports of Ukrainian grain during the last three years and currently is the largest importer of Ukrainian grain.

In 2020 Ukraine exported up to 6.3 million t. of grain to China, which is amounted to $ 1.87 billion. Spain, Bangladesh, Israel and Turkey are the other major importers of Ukrainian grain, with the last one being a complete newcomer to the top ten of importers.

Thus, in total, these 10 states formed more than 63% of the value of all purchases of grain products.

2.3. Market Forecast

During the first month of 2021, grain exports from Ukraine have decreased by 21% - it amounted to 30.7 million tons against almost 40 million in January last year.

The Ministry of Economic Development expects that in general for the marketing year grain exports will fall by 20.5%, it is expected to amount to 45.4 million tons.

It is expected that by the end of current year the volume of grain exports will increase up to 45.7 million tons, according to the Ministry of Economic Development and Trade and agriculture of Ukraine.

2.4. Wheat and Flour Market

I'd like to show on the example of wheat whether it is more profitable for Ukraine to invest in the finished product and export it as opposed to proceed with exporting wheat as the raw material.

Firstly, a look at world market for both wheat and flour is needed. The world flour market is large: it is about 14 million tons or 4.6 billion US dollars, so there are plenty of prospects.

The world flour market has a lot of barriers to entry. Take Turkey as an example. It sells flour to such countries as Iran, which is impossible for Ukraine due to sanctions.

There is also an issue of strong competition among countries-suppliers. With Turkey being one of the largest global producers of flour there is hardly any potential for growth in demand for Ukrainian flour in the world market.

The global flour market is also characterized by being rigid in terms of tariff and non-tariff barriers, as well as the customer quality requirements. Indonesia can be taken as an example as it is one of the world's major importers of wheat.

The tariff regime for wheat was set by the country at a maximum of 5% in 2016, whereas for flour - the tariffs can be raised up to 30%. The difference is even more drastic when comparing the volume of imports.

Total wheat imports was more than $ 2.4 billion in 2016, whereas there was more than $ 42 million worth of flour.

Turkey, Kazakhstan and Pakistan control more than 40% of world flour exports and have a well-established regionalization of supplies, existing free trade agreements with major importers and others.

Under such a strong competitiveness finding and retaining customers can be done mainly by having a competitive advantage - price / quality.

Ukraine is among the top three world leaders in grain exports, however it has much lower ranking in terms of trade in flour products.

Exporting wheat for Ukraine currently is more profitable than exporting flour. For example, the exporter's profit from 1 ton of wheat in 2016 was about $ 7-8 compared to $ 3-4 for the export of 1 ton of flour. Another important issue to consider is the conditions of VAT refunds on exports.

Turkish flour mills, for instance, operate under a special customs regime - raw materials are not taxed, and the proximity to ports provides low logistics costs. So, it is vital to investigate whether Ukraine has the potential to entry the global flour market and be competitive there.

The volume of transactions on both wheat and flour markets differs enormously. From the supplier perspective the production of the flour is characterized by low cost and low technology.

As for Ukraine, flour is only needed for domestic consumption, so that there would be no need in importing it.

Therefore, the main issue is the consumer preferences and here's a weak point for Ukrainian wheat as the raw material for producing flour.

Ukraine has a strong raw material base, which annually provides production of over 60 million tons of grain. It has developed a network of processing plants with a total processing capacity of 6-7 million tons of grain per year[5].

However, the development of the industry for some time was focused on reaching the domestic demand.

Therefore, it is logical that due to this there were no reasons for the growth of the industry. Overall, the flour market in Ukraine shows a tendency to shrink: production reductions have reached almost 30% over the last 10 years.

Official statistics of Ukraine shows that the volume of flour production in Ukraine in 2016 amounted to about 2 million tons.

As for the exports over the last 15 years flour exports have increased 100 times - to 370 thousand tons in 2016.

The benefits of exporting flour are confirmed by the fact that exports of high-grade flour in 2016 were accompanied by an average $ 13 higher price than the domestic market price.

Production of wheat flour in Ukraine in the 2021 marketing year is expected to decrease by 9.7% to 1.96 million tons. Exports are expected to drop 2.5 times due to rising wheat prices. There are however a lot of advantages for the economy to be reorganized into production of the finished product, such as flour.

[5] http://uga.ua/news/rinok-zerna-ukrayini-vid-eksportu-sirovini-do-gotovoyi-produktsiyi/

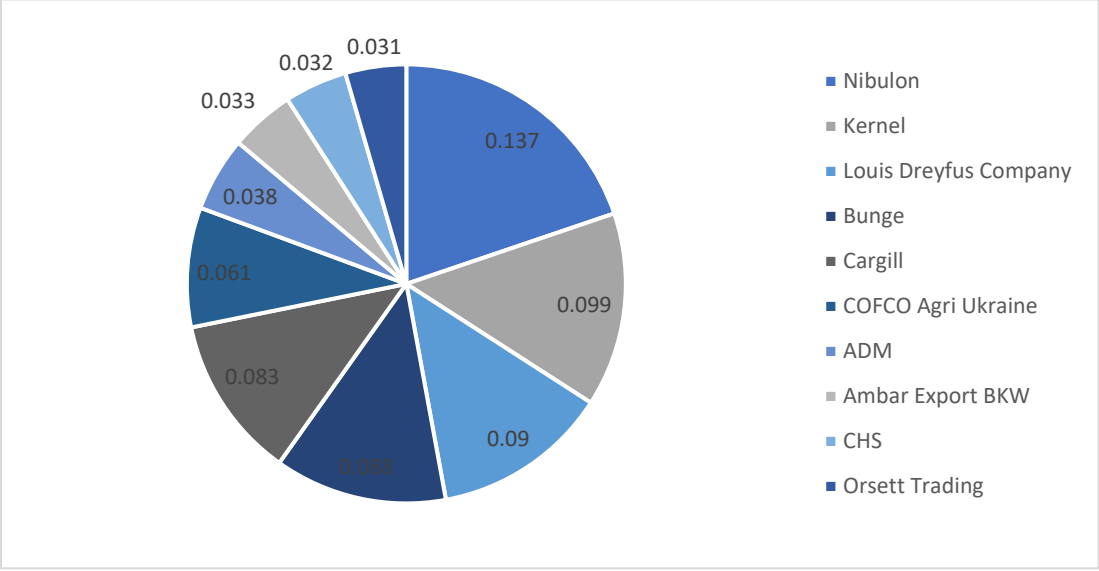
The export of products with higher value added would create additional jobs. It is also a stimulating factor for the development of the processing industry. It would stimulate investment, thereby increasing the welfare of the country. The competitiveness of agricultural products is highly influenced by the system of prices and pricing.

2.5. Main Exporters

The analysis will be incomplete without mentioning the main exporters of Ukrainian wheat. As can be seen from the Figure 5 the major exporter is Nibulon with the market share of almost 14%.

The company is the largest exporter of Ukrainian wheat which can be illustrated by the fact that by the end of 2018, the company exported every eighth ton of wheat.[6] This is achieved through a powerful river fleet owned by the company.

Figure 5. The market share of 10 major Ukrainian wheat exporters, 2018.



[6] https://latifundist.com/en/rating/top-10-eksporterov-pshenitsy-iz-ukrainy-2018

Source: Created based on the data from latifundist.com

2.6. Overview of related studies

For a better understanding of the problem in question I analyzed the researches that were conducted in the past. There are several studies that were used for my Master Thesis, which are the most relatable and useful regarding to the topic analyzed.

The first one is the study of Lotysh O. "Strategic analysis of the grain industry of Ukraine: status and prospects of development". This article is useful as it describes in detail the strategic analysis and evaluation of the current state of the grain industry in Ukraine.

The analysis also states the main indicators of the functioning of the grain market and describes the export potential of the grain industry.

One of the most recent studies was made by Institute for Economic Research and Policy Consulting, which is "Comparative assessment of Ukrainian grain export policies". It contains the analysis of the benefits from export restrictions as well as the analysis of Ukrainian agricultural policy. It focuses on the analysis of export restrictions.

The study of John Baffes, Tassos Haniotis "The Demand and Supply of U.S. Agricultural Exports: The Case of Wheat, Corn, and Soybeans" focuses on the demand and supply for exports. Mainly I rely on the similar analyses, though for countries other than Ukraine.

2.7. Technology

In order for the research to be accurate it is vital to briefly describe flour production technology.

It is known that wheat flour is made mostly from wheat, however there are some amounts of additives which are usually added depending on the type and purposes of the product.

Wheat flour for commercial purposes contains a small number of additives (the additives are added a few parts per million).

The production process consists of two main stages - preparatory and direct grinding of grain.

At the first stage, the grain mass is cleaned of impurities, and hydrothermal treatment of grain is conducted.

First of all, the wheat grains go to the flour mill. It is tested for physical qualities and is estimated by some factors, but mainly by its protein content.

Before proceeding the monitoring of grain's quality is needed. It is important to determine the content of garbage and harmful impurities, the content of crude gluten and moisture.

Before moving wheat grains into a flour plant, the grains have to be liberated from any undesirable unfamiliar part. So, grains go through different cleaning processes. After each cleaning stage, the grains are checked.

The main tool that is used during the cleaning stage is a separator. What it does is it passes the wheat from metal screen of different sizes. The wheat and other objects go through the screen leaving behind huge shakes and stones.

On the nest stage wheat goes through a suction tool. It operates like a vacuum cleaner sucking out any particle lighter than the grain of wheat.

After that, the grains go through circle separator. It moves the wheat over a number of plates. Grains and comparable weight objects are grouped in one place. More lighter objects are isolated. Then the wheat grains are prepared for grinding.

CHAPTER 3. METHODOLOGY

The main issue to be investigated, as it was stated in the introduction the export revenues of raw materials in comparison with finished goods, precisely what is more beneficial.

To do this the research should consist of several stages, which will be described in details below.

This chapter contains the research methodology of the work, which outlines the research approach and method.

In order to satisfy the objectives of the study and to investigate the effect of selling finished products in comparison with selling raw materials the quantitative research method is used.

It is necessary first of all to specify the market of interest, which is agricultural market, precisely grain market. An overview of the market itself and its main indicators is provided in the previous chapters.

As it is indicated in the Chapter 1 the goal of this research is to investigate whether Ukraine would gain more when producing, selling and exporting finished goods rather than raw materials, specifically in grain market.

To answer the question of whether the export of finished products is more profitable than the export of raw materials, it is necessary to make some calculations, the results of which will be described in next chapters.

The calculations are related to the export potential of Ukrainian producers of wheat and flour. In order to measure the potential and effectiveness it is necessary to analyze

previous activity, specifically, what was export revenue of producers (for both raw material and finished goods).

To do this some historical data was collected, specifically, on the export prices and volumes for Ukrainian wheat and flour.

Another important issue to investigate is the comparison of the raw material and finished goods in order to identify what is more beneficial to export – raw material (wheat for that matter) of finished goods (flour).

CHAPTER 4. DATA

The data on grain market mostly is available, however some parts of it can be found only on closed resources.

For the purpose of my research a number of publicly available sources and databases will be used.

The main source of the data for the research is country-level data for grain market obtained from the State Statistics Service of Ukraine.

The years analyzed would be from 2010 till 2020, the data for 2021 would not be included as it is only partially available.

As the specifics of my topic require some specific data, I used data from one of the leading in the agricultural market analytical agencies "APK-Inform".

The data that is used are average monthly prices for wheat and flour, as well as the volumes of production.

The main purpose of the analysis is to determine the factors that affect the export revenue for raw materials and finished goods on grain market.

To do this I refer to the State Statistics Service of Ukraine databases as well as the data from the market analytical agency "APK-Inform".

The dataset collected contains the following data:

- The cost of flour and wheat exports in US dollars (2010-2020) – see Appendix A
- The total quantities of flour and wheat exported (2010-2020)

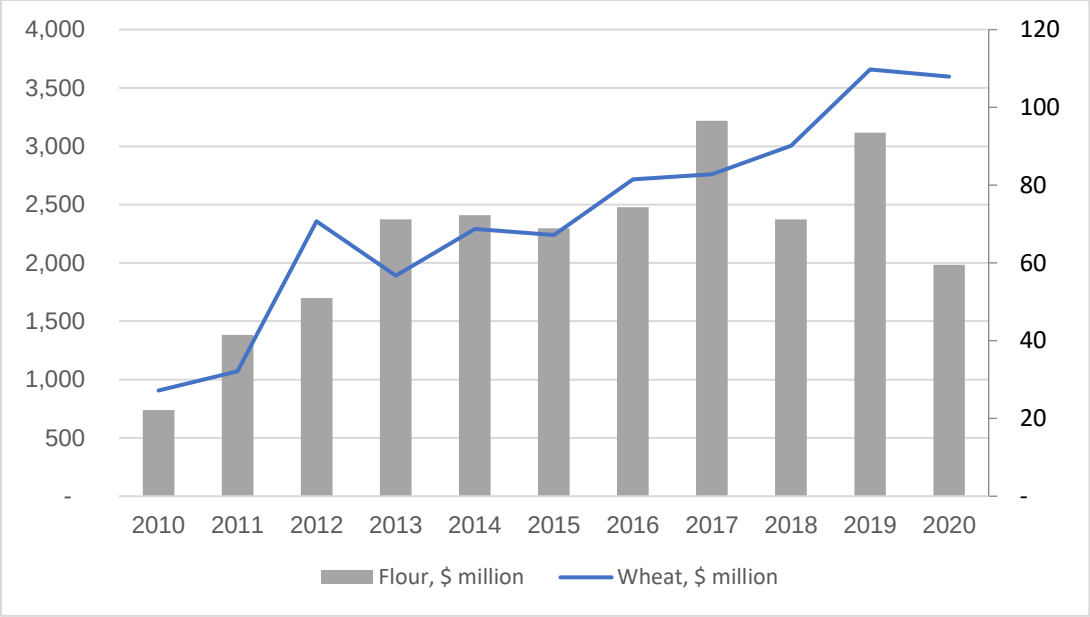
- The total quantities and prices of flour and wheat exported by the major importers of Ukrainian goods (2010-2019)

- Export Revenues of Ukrainian wheat and flour (2010-2020)

CHAPTER 5. RESULTS

Over the past decade, there has been a steady increase in export revenues from the sale of wheat. As can be seen from the figure 6 2019 was a record year for wheat exporters, with the slight decrease in 2020.

Figure 6. Exports Revenues of Ukrainian wheat and flour (2010-2020).

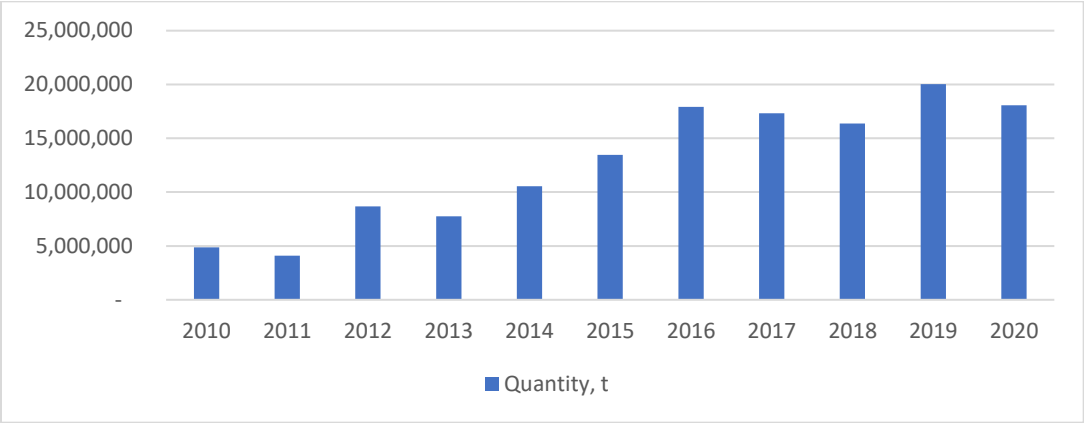


Source: Created based on the data provided by the SSSU.

The figure below illustrates the total quantity movements of exported wheat. It can be seen that during 2013-2016 the total quantity of exported wheat have been increasing at a constant rate, approximately 23% a year.

On the whole, we see a clear upward trend in the total amount of exported wheat.

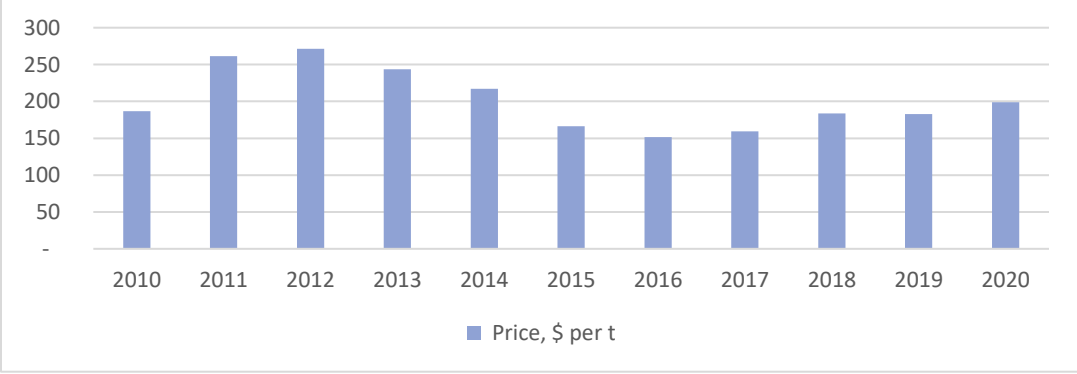
Figure 7. The total quantity movements of exported wheat (2010-2020).



Source: Calculated based on the data provided by the SSSU.

The Figure 8 shows the price movements of exported wheat in 2010-2020. It can be seen that during 2012-2016 there was a constant decrease in prices, approximately 11% a year. However, from the 2016 year the export prices for Ukrainian wheat went up.

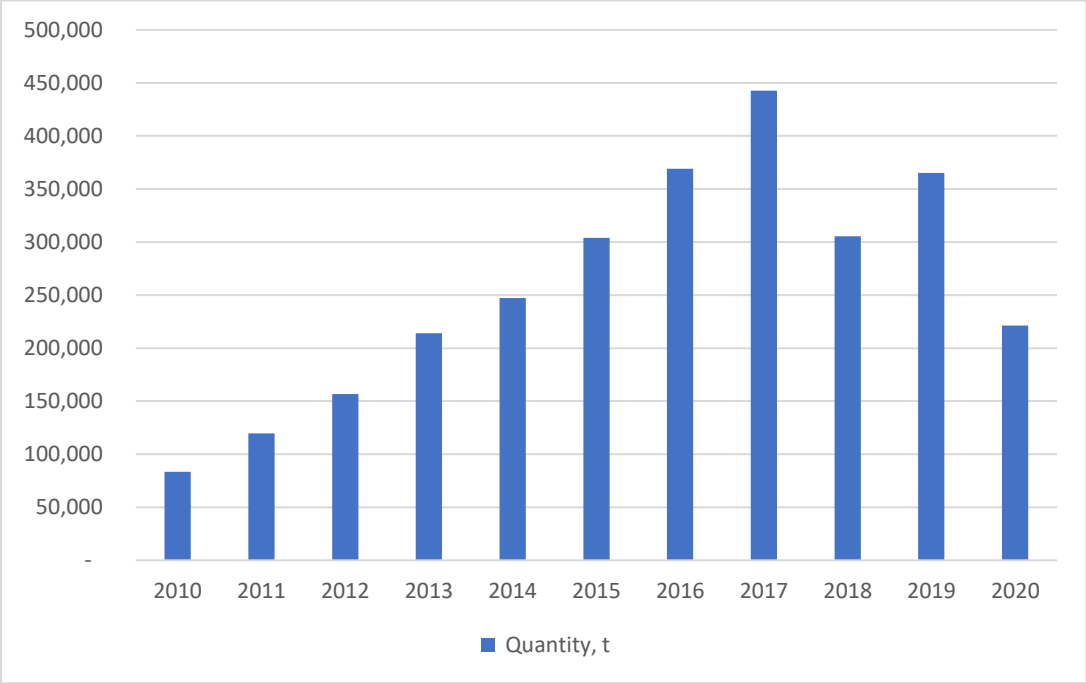
Figure 8. The price movements of exported wheat (2010-2020).



Source: Calculated based on the data provided by the SSSU.

The Figure 9 illustrates the total quantity movements of exported flour. It can be seen a clear upward trend in the total quantity of exported wheat. During 2010-2017 the total quantity of exported wheat have been increasing at a constant rate, approximately 22% a year.

Figure 9. The total quantity movements of exported flour (2010-2020).



Source: Calculated based on the data provided by the SSSU.

The Figure 10 shows the price movements of exported wheat in 2010-2020. It can be seen that during 2012-2016 there was a constant decrease in prices, approximately 11% a year. The decline in prices can be explained by a good harvest in countries that export grain, such as Canada, the United States and Russia.

However, from the 2016 year the export prices for Ukrainian wheat went up. It is mostly explained by the weather conditions of the corresponding year which adversely affected the yield of early grain crops in Ukraine. Although modern grain growing technologies may improve the situation these and other factors have provoked rising prices for Ukrainian wheat.

Figure 10. The price movements of exported flour (2010-2020).

Source: Calculated based on the data provided by the SSSU.

To test the hypothesis of whether the export of finished products is more profitable than the export of raw materials, it is necessary to make some calculations.

Table 1. Calculation of revenue from the sale of wheat and products of its processing (on the example of average prices in the 2019/20 marketing year).

Wheat, t	1 000 000
Average wheat price (FOB) - APK-Inform monitoring, $/t	210
Average price of flour (offer, EXW) - monitoring "APK-Inform", UAH/t	8 265
Production of flour (yield 20%), t	200 000
Revenue from sales of wheat, $ million	210
Revenue from the sale of flour, UAH million	1 653
Revenue from the sale of flour, $ million	64

Source: calculations based on the data of "APK-Inform".

The calculations show that the export revenue from the sale of 1 million tons of wheat is on average more by 146 million dollars (or 146 USD per ton) from the sale of the product of its processing - flour (i.e., finished products). Now to make more precise/accurate conclusions it is better to take a wider period observed. Therefore, similar calculations were made for the previous three marketing years, namely 2017-2018, 2018-2019 and 2019-2020. The results of calculations are provided below.

Table 2. Calculation of revenue from the sale of wheat and products of its processing (on the example of average prices in the 2017-2020).

Wheat, t	1 000 000
Average wheat price (FOB) - APK-Inform monitoring, $/t	207
Average price of flour (supply, EXW) - monitoring "APK-Inform", UAH/t	7 673
Production of flour (yield 20%), t	200 000
Revenue from sales of wheat, $ million	210
Revenue from the sale of flour, UAH million	1 535
Revenue from the sale of flour, $ million	59

Source: calculations based on the data of "APK-Inform".

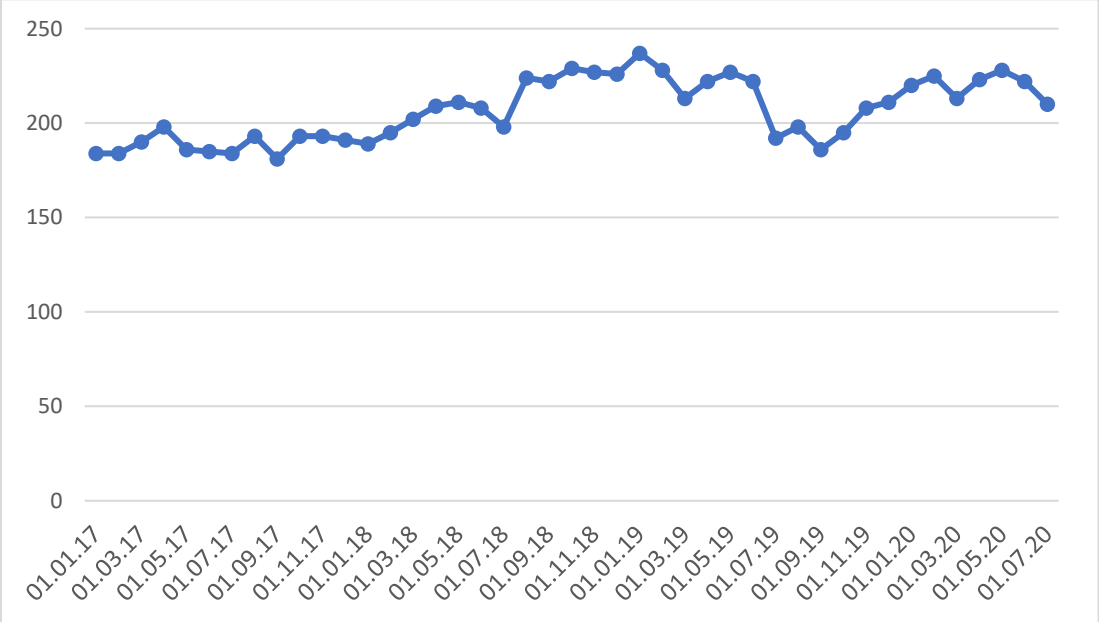
The calculations show that during 2017-2020 years the export revenue from the sale of 1 million tons of wheat is on average more by 148 million dollars (or 148 USD per ton) from the sale of the product of its processing - flour (i.e., finished products).

These calculations are a direct confirmation that export revenue is higher for raw materials (in this case - for wheat) than for finished goods (in this case - for flour).

This conclusion is interesting because it contradicts a popular opinion that it is not raw materials that should be exported but finished goods.

As can be seen on the graph below the export prices for Ukrainian wheat during the past three years were relatively constant with the slight deviations from an average price of 200$ per ton.

Figure 11. Export prices for Ukrainian wheat (2017-2020).



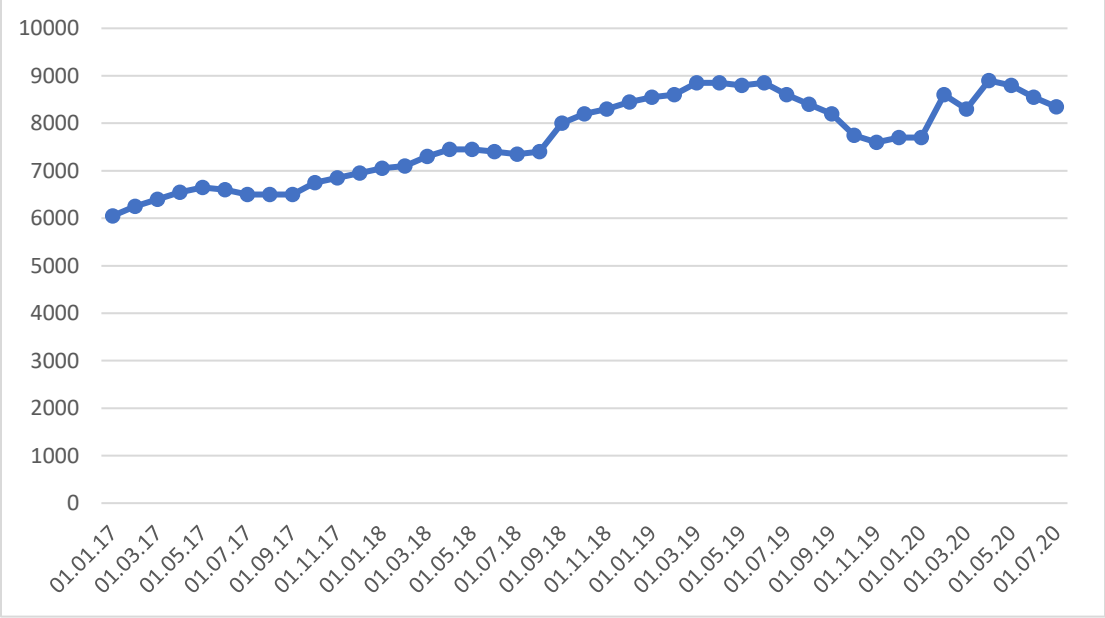
Source: Calculated based on the data provided by the APK-Inform.

According to traders, prices for Ukrainian wheat may continue in the future to strengthen under the influence of unclear prospects for wheat production.

The graph below shows the export prices for Ukrainian flour during the past three years. The prices were within 6000 to 9000 UAH per ton.

There is a visible upward trend, however an increase of the price is gradual, not sharp. There was some stabilization in the Ukrainian wheat flour market. However, an upward price trend began to dominate. It is largely due to the rise in price of raw materials in previous years and, therefore, increased costs for the production of finished products.

Figure 12. Export prices for Ukrainian flour (2017-2020).



Source: Calculated based on the data provided by the APK-Inform.

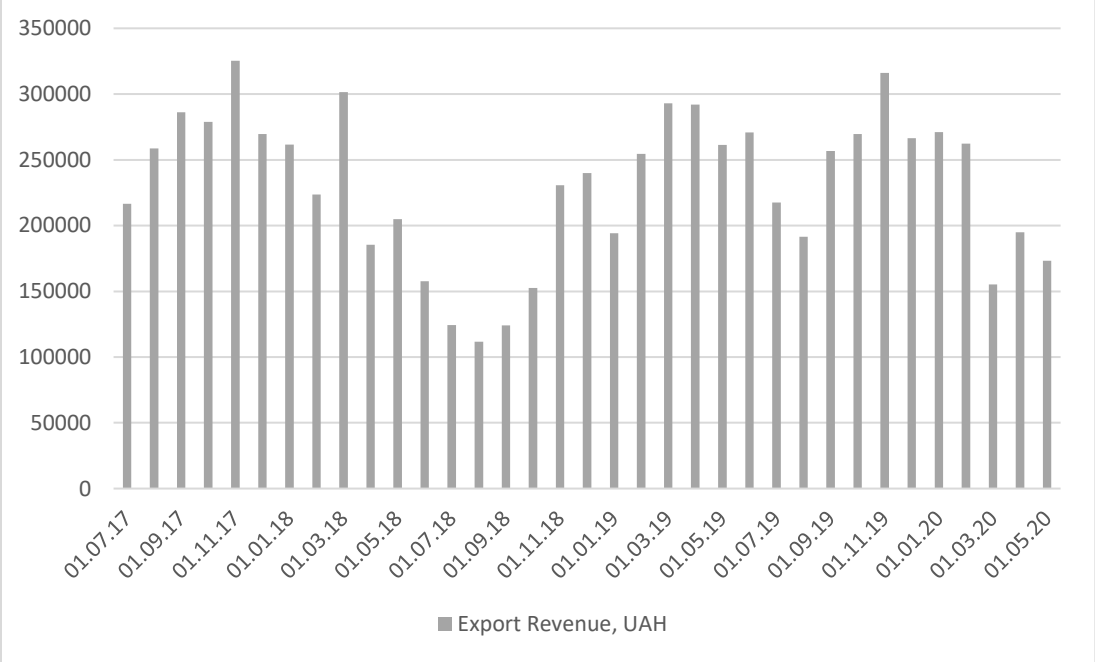
The export prices are one of the key components of the export revenue.

As can be seen on the graph below the overall dynamics of flour exports in 2017-2020 marketing years is rather negative than positive, which is confirmed by the figures for recent year.

It is expected to be a further decline as the volume of flour production is declining from year to year for the last ten years.

Ukrainian producers explain such a decrease in sales by high wheat prices and the associated weak export demand. However, the negative dynamics of exports began to accumulate even before a sharp increase in grain prices, which was observed in the beginning of 2021.

Figure 13. Export revenue of Ukrainian flour (2017-2020).



Source: Calculated based on the data provided by the APK-Inform.

However, it should be stated that it is incorrect to conclude on the basis of only one indicator of export revenue what is more profitable to export.

After all, from the point of view of macroeconomics, and not individual exporting producers, the main indicator is GDP.

Therefore, it is important to emphasize what shapes GDP, namely value added, not export revenue.

Value added is one of the main indicators of the economy as a whole. It is so, because value added is one of the most influential indicators of the economic system.

It is formed by the properties of the good, which increase its quality and attractiveness while reducing production costs.

There is a positive relationship between value added and the degree of processing of goods.

The higher is the last one, the higher is its value added by consumption. However, in market conditions, the value of the final good must meet the requirements and capabilities of buyers, taking into account their purchasing power and social significance of the product.

CHAPTER 6. CONCLUSIONS AND RECOMMENDATIONS

6.1. Conclusions

The most important component of the agricultural industry of Ukraine is the grain industry. Grain production has a significant share in the structure of the agricultural industry of Ukrainian economy.

The other important issue is that Ukraine is one of the largest exporters of grain in the world.

In this chapter I would like to provide my conclusions and recommendations, which are grounded in the analysis of the Ukrainian grain market.

In this thesis, we examined whether an opinion dominating in the expert environment about the necessity to export finished agricultural products rather than agricultural raw materials is well-grounded.

Therefore, the focus is on the analysis of the efficiency of exporting finished agricultural goods of agricultural, precisely wheat as opposed to flour.

Thesis is intended to check whether the exports of agricultural raw materials is more effective than the exports of finished goods.

The focus of the research is on grain products, specifically wheat as an example of a raw material and flour as an example of a finished good.

As it is known Ukraine is one of the major exporters of grain. Exports of agricultural products constitutes a substantial share of Ukraine's GDP, namely 45%.

Over the past 10 years Ukraine has set a record: grain exports in 2019 which were 4 times higher than in 2010. Though this is not a limit - Ukraine has the great potential to

increase grain exports. The forecasted wheat production for 2021 is more than 27 million tons. Simple calculations show that Ukraine produces three times more wheat than it needs.

The world market for both wheat and flour was analyzed. The conclusions made are that Ukraine is among the top three world leaders in grain exports, however it has much lower ranking in terms of trade in flour products.

Using the data - average monthly prices for wheat and flour, as well as the volumes of production the revenues from the sale of wheat and products of its processing were calculated.

The results of the calculations provided are so that exporting wheat for Ukraine currently is more profitable than exporting flour.

To be precise the calculations show that the export revenue from the sale of 1 million tons of wheat is on average less by 146 million dollars from the sale of the product of its processing – flour.

6.2. Recommendations

Given the state of the Ukrainian market, it is recommended that Ukrainian producers have to improve the quality of their products and expand the variety of products.

This can be done by introducing the latest production technologies, and by adapting to the requirements of the importing countries.

For example, nowadays more than 95% of the companies use equipment that is more than 30 years old. This is considering that the capacity utilization is circa 50-60%.

What should be improved is not only that concerns the quality of flour products itself but also packaging and product labeling.

Under the conditions of global competition, it is vital to pay attention to the factors that can increase the margin of production, therefore ensuring a balance of quality and competitive price.

Companies that produce flour should invest in the newest production technologies and energy-saving technologies in order to reduce the cost of production and improve the quality of their products.

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APPENDIX A

Table 2. The cost of flour and wheat exports in US dollars (2010-2020).

	Cost, $ million	
Year	Wheat	Flour
2010	906	22
2011	1 070	41
2012	2 357	51
2013	1 892	71
2014	2 291	72
2015	2 238	69
2016	2 717	74
2017	2 759	97
2018	3 004	71
2019	3 658	93
2020	3 595	59