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Price Trends in the Pork Market

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Abstract. The pig industry and the pork market occupy an important place in providing the population of both the world and Ukraine with basic food products. The economic development of individual countries of the world and population growth increase the demand for pork, which leads to an increase in its production. Pig breeding in Ukraine is a historically established, traditional industry. However, its current state does not ensure sustainable and efficient pork production in Ukraine and requires significant improvement. The purpose of the study was to investigate the price situation in the pork market and describe the factors that caused it. In the course of the research, a set of methods was used: monographic, retrospective, comparative analysis, abstract and logical, induction and deduction, graphic, which allowed identifying and substantiating the existing price trends of the pork market. The analysis of the volume of production and sale of pig meat by the main producers in live weight and the price situation on the pork market in 2017-2021 was carried out. Special emphasis was placed on detailing purchase, wholesale, and consumer prices in different regions of the country. A steady trend of rising prices in the pork market is substantiated. It is established that in Ukraine during 2017-2021 there was an increase of 1.6-2.3 times in all types of prices for pork. The study results contain analytical materials and theoretical justifications that expand knowledge about the price situation on the pork market. The obtained materials can be used by all interested parties and specialists for consideration in production activities and for further scientific study of the problems of the establishment and functioning of the pork market

Keywords: price situation, purchase price, wholesale and retail price, consumer price, demand, pork

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Introduction

Pork has occupied a significant place in the human diet for thousands of years. Its production and consumption are related to the development of the agricultural production culture. Pig farming is an important livestock industry on every continent, although many cultures do not consume pork according to their religious laws, such as Muslims [1].

Meat and lard are among the main food items. Pork is a source of high-quality protein. It is also rich in vitamins and minerals such as selenium, phosphorus, thiamine, potassium, and vitamin B6, and is considered an excellent source of iron [2]. The economic development of countries leads to an increase in the well-being of the population, an increase in demand for food, and changes in consumption patterns, where meat and meat products become dominant in consumption.

The rapid growth of the world's population, combined with an increase in per capita income, has led to changes in eating habits characterised by an increased demand for animal protein [3]. The need to meet global demand for pork caused a rapid increase in its production in the world by 4.5 times between 1961 and 2021, from 24.8 to 109.2 million tonnes. According to FAO forecasts, global pork production will increase by 13% by 2030 compared to 2018-2020 levels and reach 173 million tonnes [4].

In the European Union and the United States, the number of pigs has not changed significantly in recent decades, while in Asian countries it is increasing and mass production is increasing [5].

Pig breeding is a traditional industry in Ukraine and plays an important role in providing the population with meat. The priority of development of this industry is associated with extremely important biological and economic characteristics of pigs, in particular, multiple pregnancies, omnivory, and economical use of feed. However, in modern conditions, it is in a depressing state [6].

In recent years, the actual state of the pig industry does not meet certain strategic objectives and existing resource potential and requires significant improvement. In particular, the "National Economic Strategy 2030" contains vectors of economic development of the agricultural sector in the aspect of balanced production by increasing control over the detection of cases and elimination of the consequences of African swine fever, developing measures to combat the disease; stopping the reduction of the number of pigs and ensuring its growth; changing the structure of production by increasing agricultural enterprises; improving the quality of livestock by reducing the cost (up to 50-80% of the cost) of purchasing breeding (genetic) resources, etc. Drastic changes in the functioning of pig farming provide for maintaining stable and profitable pork production in Ukraine, promoting the increase in pork production by agricultural enterprises and increasing their share in total production [7].

Insufficiency, and often imperfection of laws and regulations regarding the functioning of the pig industry, in the aspect of insurance, disposal, and compensation of losses due to African swine fever is an obstacle to its development [8].

Prices for agricultural products are of primary importance both for the agricultural sector (they encourage

optimisation of production systems and affect their goals) and for consumers who buy specific products. Market price analysis is also an indirect means of evaluating market performance. Price volatility in European food markets has increased over the past decade, putting agribusiness at financial risk and uncertainty [9].

Price volatility is a key aspect of financial risk for all market participants, including producers, processors, sellers, and consumers [10]. The modern pricing policy of enterprises demonstrates the logic of price formation, reveals two approaches to pricing – cost and value, which determines the external and internal orientation, and market and internal factors that affect the price level and determine its choice [11].

The transformation processes taking place both in the pig industry and in the pork market in Ukraine could affect the dynamics of prices in the food chain. In the context of globalisation, the domestic and foreign markets of agricultural products affect each other and undergo certain changes, which affect the level of different types of prices. The study of the market conditions of a particular type of agricultural product and the corresponding changes in it occurs precisely from the study of prices [12].

The purpose of the study was to investigate the current state of various types of prices on the pork market and substantiate the features of their formation.

Literature Review

The issues of the establishment and functioning of the pig industry and prices in the pork market are relevant and has been the object of study by many researchers. Thus, C. Roguet, B. Duflot & M. Rieu [13] investigated the evolution of pig breeding models in Europe and their impact on technical and economic indicators. The evolution of pig farming since 2000 is characterised by a very strong structural concentration in some countries. This leads to rapid progress in technical indicators, due, in addition to genetic progress, to the disappearance of the least efficient farms, the specialisation of farms, the modernisation of buildings and, as a result, the improvement of the health, working conditions of personnel and the life of animals. This development is also reflected in the intensification of pig farming, which meets with growing opposition in society. The development of pig production and breeding models is constrained by two antagonistic forces, the relationship of which develops over time. On the one hand, a liberal and highly competitive market, which encourages the intensification of activities, and on the other – the rejection of this intensive model by society, which is expressed through the mobilisation of breeding projects [13].

To analyse consumer attitudes and perceptions of pork, an online survey of 11,294 consumers from ten EU countries and four non-EU countries was conducted. The survey showed that while animal welfare influences consumers' opinions about pork consumption, it is not their main concern. For most countries, the rating of food motifs gives preference to personal health and naturalness of the product, organoleptic qualities, and price [14].

Identifying the contribution of local pork production to the well-being of the poorest ethnic minority households in Vietnam using the propensity score comparison method and identifying factors affecting local pig farming using the generalised Poisson method was the goal of the study by N.N. Ho, T.L. Do, D.T. Tran & T.T. Nguyen [15]. The findings showed that local pig farming had a significant and positive impact on household incomes and the reduction of multidimensional poverty among ultra-poor ethnic minority households. Access to credit, the number of motorcycles, government support for poverty, the type of roads in villages, and irrigation systems have a positive impact on local pig farming, while the impact of distance from home to the nearest agricultural materials stores and access to electricity is negative [15].

W. Rembiss & D. Zawadzka [16] investigated the problem of stability of income from pig farming in Poland. The study attempts to answer the question of whether there is volatility or relative stability of income in the pig market. This issue is important not only for producers, but also for agricultural policy. Using simple statistical methods, the authors estimate income variability between 2005 and 2020, i.e., after Poland joined the European Union. Recognising that this was a heterogeneous period, the study also included income for two sub-periods, particularly 2005-2012 and 2013-2020. The accepted research hypothesis regarding the relative stability of revenue due to certain interchangeability of the price level and the volume of purchases turned out to be quite incomplete only for the period 2005-2012. For the period 2013-2020, the analysis of graphs, coefficients of variation and correlation gave different results that did not allow confirming the assumption and hypothesis [16].

The complexity of the pork supply chain for obtaining quality products is emphasised by C. Perez, R. de Castro, I. Font & M. Furnols [17]. Their research paper provides a holistic view of the pork supply chain. They prove that by treating pork production as a chain, rather than as separate stages performed by different companies, the meat sector can more easily solve the problem of accurately responding to customer requirements, including with respect to established prices. Supply chain participants get different opportunities from cooperation, which allows them to become more competitive than if they remained isolated and did not have a global understanding of the entire chain [17].

A group of researchers led by Joao G.M. Dos Reis [18] emphasises that in order to determine and minimise financial losses in the pork supply chain, it is necessary to consider the price paid by the end user and from which all participants in the pork supply chain receive remuneration.

The impact of COVID-19 and the transmission of prices in the US Meat Market were investigated by A.F. Ramsey, B.K. Goodwin, W.F. Hahn & M.T. Holt [19]. Using weekly data on wholesale and retail prices for beef, pork, and poultry, the authors characterised the behaviour of time series and dynamic relationships of meat prices in the United States before and during the COVID-19 pandemic. Meat prices at all levels of the supply chain were found to be non-stationary in levels, but co-integrated

within each market. All three meat markets are well integrated at the retail and wholesale levels. Abnormally large price fluctuations as a result of COVID-19 have been detected. However, the timing and area of these movements vary depending on the market. The largest price discrepancies were observed in May-June 2019 for beef and pork and in April-May 2019 for poultry. Overall, wholesale prices reacted faster to the shocks caused by COVID-19. Prices returned to projected levels in June-July 2019. This indicates that supply shocks in meat markets due to COVID-19 were mostly temporary. The results of this study indicate the sustainability of meat supply chains in the United States [19].

J.Y. Yoon & B. Scott [20] note that asymmetric price transmission in the US pork market looks different in distribution channels. They prove that wholesale price correction occurs relatively quickly in response to an increase in the producer price and a decrease in the retail price [20].

Significant changes in prices for agricultural products in Poland are evidenced by P. Borawski, A. Beldycka-Borawska & J.W. Dunn [21]. However, pork prices have changed the most, due to changes in production costs and competition between participants in the production chain. The pork market in Poland is facing problems due to strong global competition. In order to reduce production costs, producers import piglets from Germany, the Netherlands, and other countries [21].

Pork market participants in Zimbabwe use short-term pricing strategies, considering factors such as product portfolio, margin, processed goods, and considering the strategies of other industry players as dualistically determining objective pricing policies and price flexibility policies. Researchers recommend that decision-makers in the pork market move away from short-term pricing goals: profit-making and survival, and develop new pricing strategies based on increased sales and competitive pricing [22].

Asymmetric price transmission in the Chinese pork and pig market was investigated by X. Dong, C. Brown, S. Waldron & J. Zhang [23]. Thus, a symmetrical transmission between the prices of pork and live pigs was discovered in the period from June 1994 to June 2007. Asymmetric transmission was also observed between June 2007 and June 2016. The key factors underlying the asymmetric price transmission are poultry meat prices and China's interim policy on procurement and inventory accumulation [23].

T. Rudinskaya [24] studied the characteristics of price relations between farmers, processors, and consumers in the Czech pork market. In recent years, farm pork prices have been unstable compared to processor prices and consumer prices. The empirical results of the approaches used show that in the short term, the price of the processor and the price of the consumer react differently to an increase and decrease in the price of the farm and the price of the processor, respectively. The results showed the presence of transmission price asymmetry, and this fact is more pronounced at the second stage of the agri-food chain, that is, in the processor-retail trade relationship [24].

Theoretical aspects of pricing and profitability of agricultural production were covered by I.I. Lukinov [25].

He argued that “the impact on the level of production costs and the social value of agricultural and livestock products of natural and geographical conditions, especially soil quality, climate, and location of farms, is so great that it cannot even be compared with the impact, for example, of these factors on industry” [25].

Research led by academician Yu.A. Lupenko [26] has been aimed at identifying the structural changes taking place in the Ukrainian meat market. Thus, the researchers note that meat producers increase production volumes with the decline of certain livestock industries, and accordingly, the structure of production changes. The pork market is characterised by fluctuations due to outbreaks of African swine fever and competition from the poultry meat market [26].

A collective monograph by O.M. Shpychak [27] focuses on investigating the theoretical, methodological, and practical foundations of pricing. The researchers clarify the essential differences between the positions of representatives of classical political economy and the economic theory of physiocrats regarding the formation of an additional product. Thus, representatives of classical political economy considered human labour to be the source of its creation, and supporters of the economic theory of physiocrats – the primary role was given to solar energy, which is accumulated and stored due to human labour, which increases added value [27].

Investigating the state of the agricultural sector of the Ukrainian economy, M.V. Prysyzhnyuk, M.V. Prong & P.T. Sabluk [28] noted that “in market conditions, the price is formed by the consumer, they evaluate the goods delivered to the market, the corresponding conjuncture is formed and the price is determined, which goes through the appropriate stages of transformation in the infrastructure links of the market, and the producer receives only a part of the income, so compensation is needed to ensure an equivalent price”.

The influence of seasonality of production on the dynamics of prices for meat products in Ukraine was determined by R. Mudrak, I. Nyzhnyk, V. Lagodiienko & N. Lagodiienko [29]. The conducted study allowed confirming the hypothesis that there is a link between seasonal fluctuations in the volume of meat and dairy production and consumer prices for the corresponding products. During the year, seasonal shortages are observed in the markets of meat and dairy products, which leads to an increase in consumer prices [29].

Given the importance of these scientific developments, the dynamism and transformation of the conditions for the functioning of the pork market require constant detailed study and analysis of the real state of prices.

Materials and Methods

The time frame of the study was the period of 2017–2021. The research material consisted of annual data on the volume of raising and selling pigs in all categories of farms, agricultural enterprises and households; monthly time series of purchase prices for pigs of categories I and II;

wholesale and retail prices for pork of category II, and consumer prices for pig meat and lard. The study collected, analysed, and summarised data for the period from 2017 to 2021. The information base of the study was publications by international and Ukrainian researchers on the establishment and functioning of the pork market and price situation on it, data and analytical reports of the Ministry of Agrarian Policy and Food of Ukraine, the State Statistics Service of Ukraine.

The methodological tools of the study included a systematic approach to cognition of economic phenomena, processes, and their interrelations. In the course of the study, a set of methods was used. Thus, using the abstract and logical method, theoretical generalisations of the developed literature sources on the functioning of the pig industry, pork production, and the formation of prices for it were carried out. The resulting generalisations allowed the study to formulate specific conclusions. The methods of monographic, retrospective, and comparative analysis, induction and deduction provided the development of theoretical provisions, analysis, and identification of features of price formation in the pork market. In turn, this allowed the study to substantiate the existing price trends in the pork market. Using the graphical method, a visual representation of individual results was provided.

Results and Discussion

The pig industry is one of the most intensive and efficient livestock industries. At the same time, in Ukraine, since 2014, the pork market has been destabilised, in particular, a reduction in the number of pigs and meat production, a decrease in demand and a decrease in export volumes. In the structure of meat production in Ukraine, the share of pork tends to decrease, in 2016 it was 32.2%, while in 2000 it reached 40.7% [30].

The main reason that led to the destabilisation of the pork market is the decline in profitability, and in most cases, the unprofitability of production. The economic disinterest of key producers in raising pigs has led to a reduction in their number. The situation in the industry was further complicated by cases of the spread of ASF (African swine fever). Small and medium-sized farms that raised pigs were forced to slaughter or destroy animals in advance [31].

According to the Association of Pig Breeders of Ukraine [8] in December 2019, 509 outbreaks of African swine fever were recorded in Ukraine, which led to the destruction of more than 300 thousand pigs. It is important to note that 17.0% of reported cases of ASF were in agricultural enterprises, and the remaining 83% – in household farms.

Often, the lack of disease prevention and control strategies in the pork production chain is the main reason for the spread of ASF [8].

Thus, the most vulnerable and affected segment is and will be small owners of pigs. Only the transformation of pig farming into medium and large farms, combined

with more standardised production systems and biosafety, will contribute to the survival of the industry in the future and improve food security.

The studies show that in 2021, the volume of pigs raised by all categories of farms (in live weight) was 1.5% less compared to 2017 and amounted to 971.2 thousand tonnes (Fig. 1).

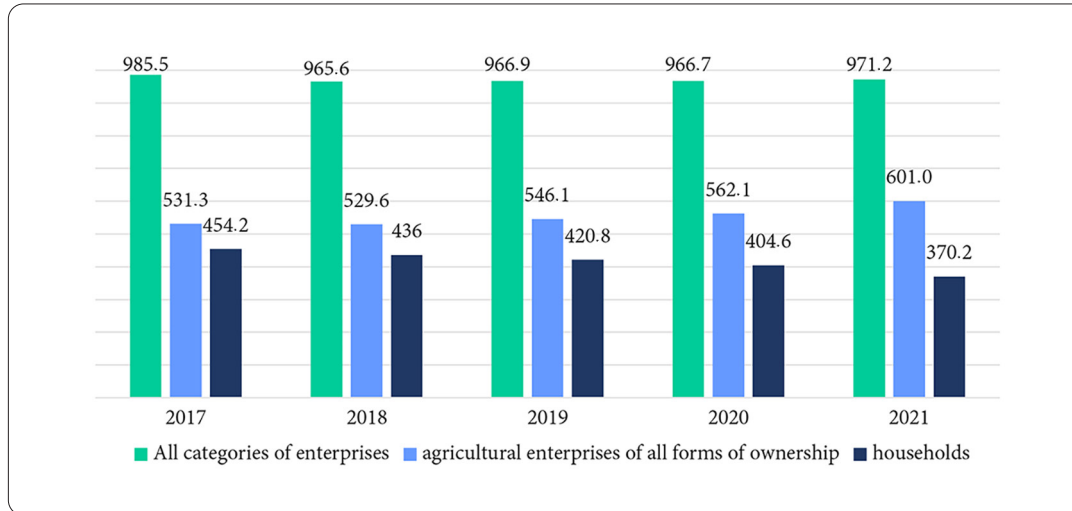


Figure 1. Raising pigs in all categories of farms in 2017-2021, thsd. tonnes

Source: developed by the author according to the State Statistics Service of Ukraine [32]

In 2021, the cultivation of pigs by agricultural enterprises (in live weight) increased by 13.1% compared to 2017 and amounted to 601.0 thousand tonnes. In the last year alone, the growing of pigs by agricultural enterprises (in live weight) increased by 6.9%. In households, the cultivation of pigs in live weight over the past 5 years decreased by 18.5% and amounted to 370.2 thousand tonnes.

Traditionally, in farms of all categories of the Kyiv, Donetsk, and Lviv oblasts in 2021, most pigs were raised in live weight. The main volumes of cultivation in these areas were provided by agricultural enterprises. Significantly fewer pigs were kept and raised in the farms of the population of these regions.

In 2021, compared to 2017, the volume of pig raising in farms of all categories increased the most in Kharkiv, Ternopil, Luhansk, and Kyiv oblasts (by 21.5-34.3%). At the same time, in Cherkasy, Kirovohrad, and Chernihiv oblasts, the cultivation of pigs in farms of all categories in live weight increased by 10-19% compared to 2017. However, most of all in 2021, the cultivation of pigs in farms of all categories in live weight in the Kherson Oblast decreased (by 59.2% compared to 2017 [32]).

During 2017-2021, the volume of sales of pigs in live weight by farms of all categories decreased by 3.3% and amounted to 987.8 thousand tonnes. The largest sales volumes were observed in 2021 in Kyiv (110.5 thsd. tonnes), Donetsk (93.2 thsd. tonnes), and Lviv (64.6 thsd. tonnes) oblasts [32].

In the study period, the volume of sales of pigs in live weight by agricultural enterprises of all forms of

ownership increased by 13.8%, while in households they decreased by 20.6%. It was found that in 2021, the volume of sales of pigs in live weight by farms of all categories was higher than the volume of growing, which indicates the slaughter of pigs [32].

It is established that in 2017-2021, the volume of sales of pigs in live weight by farms of all categories has a pronounced tendency to decrease. At the same time, in 2021, sales volumes exceeded the volume of raising pigs by farms of all categories in live weight, which indicated a massive slaughter of livestock. Moreover, this was conditioned by a massive reduction in the number of pigs in households.

The cultivation and sale of pigs depend on technological and economic factors. Technological factors include outdated technologies for raising pigs (feeding, conditions of keeping that cause feed overspending, low live weight gains of pigs), sanitary and veterinary measures; weak breeding base, import of pig genetics, insufficient fertility of sows, etc.

Economic factors include the cost of pork production, price dynamics in the resource market (feed, veterinary drugs, fuel and lubricants, electricity, etc.), the volume of supply and demand for pork, the level of purchasing, wholesale and retail prices, the purchasing power of the population, and the volume of pork imports.

The purchase price for pigs of categories I and II for 2017-2021 increased from 29.379 to 45.971 UAH/tonne, that is, by 1.6 times, and compared to 2020 – by 6.6% [33] (Fig. 2).

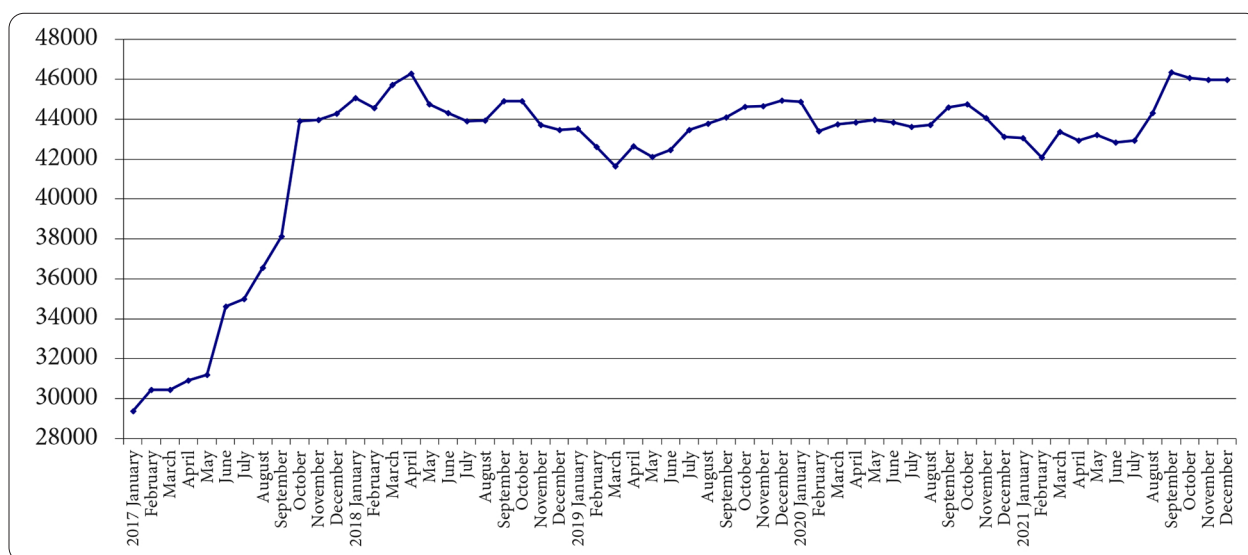


Figure 2. Purchase prices for pigs of categories I and II in 2017-2021, UAH/tonne

Source: compiled based on data from the Ministry of Agrarian Policy and Food of Ukraine [1]

During 2021, purchase prices for pigs increased by 6.8% from 43.045 UAH/tonne to 45.971 UAH/tonne. As of December 2021, in the regions of Ukraine, the highest purchase price for pigs was observed in Odesa Oblast (50.200 UAH/tonne). In other regions, prices were in the range of 42.0-50.0 thousand UAH per 1 tonne.

The lowest price was observed in the Zaporizhia Oblast (42.000 UAH/tonne) [33].

The wholesale selling price of category II pork in 2017-2021 increased by 1.7 times compared to the beginning of 2017 and by 11.5% compared to 2020 and amounted to 91.76 UAH/kg at the end of 2021 [33] (Fig. 3).

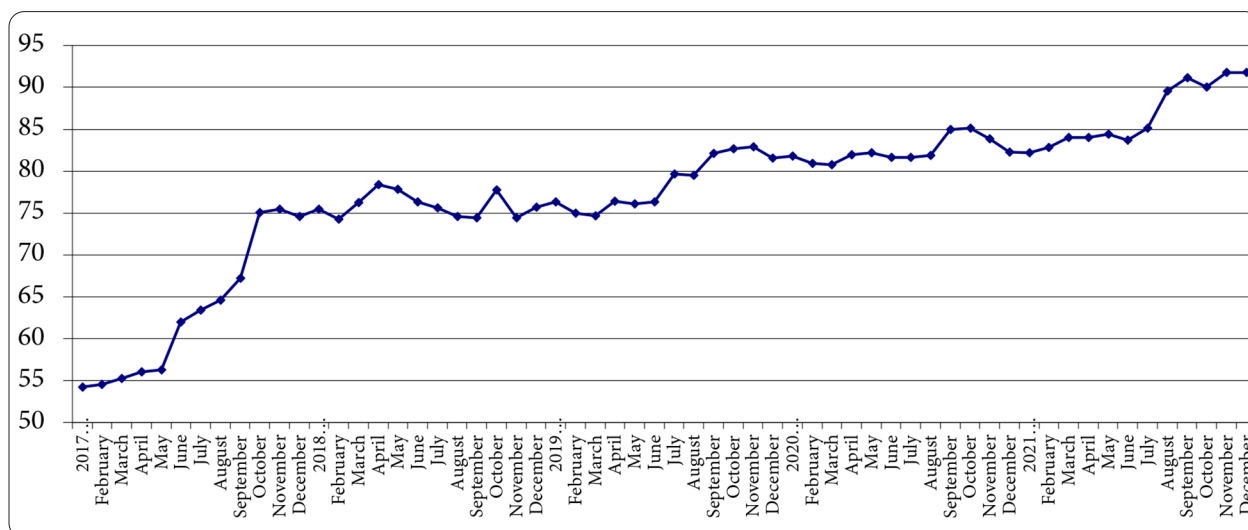


Figure 3. Wholesale and selling prices for category II pork in 2017-2021, UAH/kg

Source: compiled based on data from the Ministry of Agrarian Policy and Food of Ukraine [1]

The highest prices were observed in the Poltava Oblast (125.50 UAH/kg), the minimum price was in the enterprises of the Volyn Oblast (72.00 UAH/kg). In other regions, the price ranges from 75.00-125.00 UAH/kg [33].

In 2021, the wholesale selling price of category II pork increased by 11.6% compared to January and amounted to 91.76 UAH/kg [33]. The global market already has a significant

impact on the level of purchase and wholesale prices in Ukraine.

The consumer price of pork in 2021 continued its upward trend. Thus, according to the state statistics service of Ukraine, the consumer price of pork in Ukraine at the end of 2021 is 123.75 UAH/kg, which is 1.6 times more than in 2017 and 6.8% more than in 2020 [33] (Fig. 4).

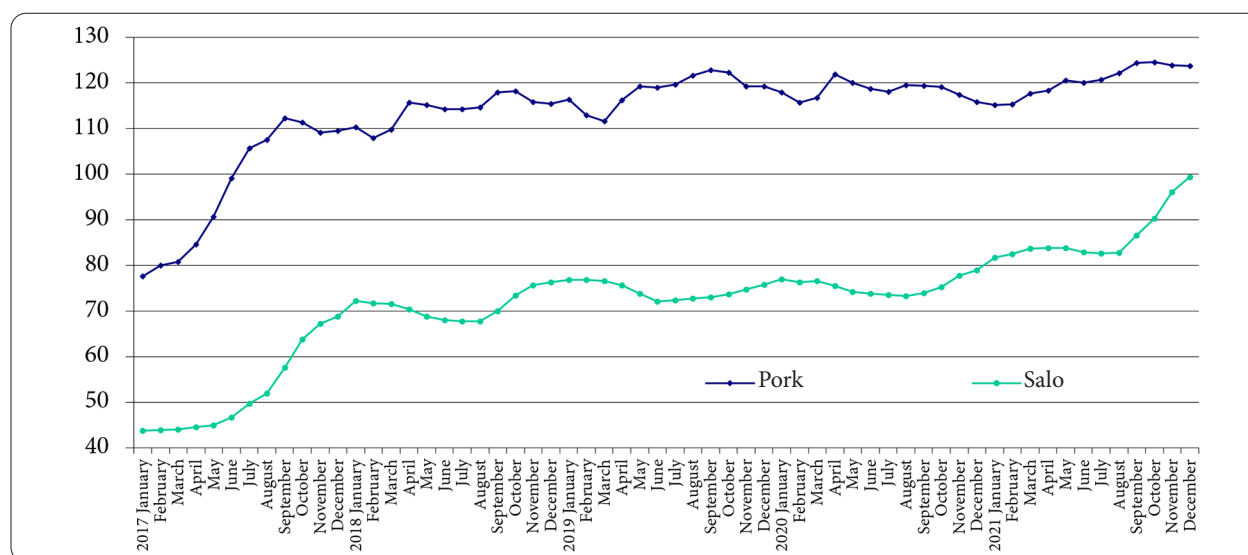


Figure 4. Consumer prices for pork and lard in 2017-2021, UAH/kg

Source: developed by the author according to the State Statistics Service of Ukraine [32]

The price of lard in December 2021 increased by 2.3 times compared to January 2017, and by 25.9% from 2020, and the average in Ukraine was 99.41 UAH/kg [32]. Notably, among the main types of meat (beef and veal, pork and poultry) in 2021, pork prices changed the least.

The analysis of data [32] on the number of the main sows allowed for the conclusion that there are no grounds for an increase in pork prices due to a reduction in the breeding stock. In particular, for the period 2017-2021, the number of pigs in Ukraine decreased by 15.9%, the number of main sows – by 20.2%, and pork production – by 1.6% [32].

It is established that the pork market is characterised by certain seasonal fluctuations in sales volumes and prices, which are associated with the most favourite holidays (New Year, Christmas, Easter, may holidays, etc. In addition, the increase in prices is caused by a reduction in the supply of pork due to a decrease in the number of pigs and the unprofitability of its production, and an increase in the price of poultry meat [30]. A significant factor in the growth of all types of prices for pork is the cost of raising pigs.

W. Rembisz & D. Zawadzka [16] argued that pork production is subject to fluctuations due to the cycle in pig farming. These fluctuations lead to the fact that the supply of pork is either too high or too low for a given demand. In the first case, prices for pig meat, especially in live weight, are low, and in the second – high. Accordingly, the revenue of agricultural producers changes [16].

Changes in the pork market conditions had a great impact on the amplitude of fluctuations in both pig raising volumes and prices in the United States. The amplitude of fluctuations in the volume of pig raising in the United States in recent years has become smaller compared to the previous decade. The reasons for this in the influence of factors on this market, which changed the ratio of supply and demand elasticity coefficients. First, according to economic theory, increased demand is accompanied by price flexibility. Second,

fluctuations in livestock prices are as strong as ever, as they depend not only on internal but also on external demand. The influence of foreign trade and the world market on the profitability and domestic market of pig meat is manifested through the exchange rates of the USD against the currencies of the countries with which the United States of America carries out foreign trade in pork [34].

Low purchasing power encourages consumers to look for cheaper types of meat. Now the advantage is for poultry meat [35]. The consumer price for poultry (chicken carcasses) in December 2021 was 70.82 UAH/kg. The consumer price of pork during this period was 74.7% higher than the price of chicken carcass. At the same time, the global trend towards healthy eating, which is also typical for Ukraine, has contributed to an increase in the number of poultry meat consumers. Today, poultry meat is one of the best sources of animal protein for the low-income population, as it is affordable, low in fat, and has limited religious taboos. The increase in demand for poultry meat contributed to an increase in significant volumes of its production.

The results obtained are confirmed by other studies. In particular, AgroPolit.com together with analysts of the Ukrainian Agrarian Association (UAA), studied the internal structure of the Ukrainian meat market and identified several interesting trends. First, meat consumption per year by one Ukrainian has not changed significantly in recent years and amounted to 52-53 kg per person. Second, the overall structure of annual meat consumption is also stable, dominated by the share of poultry meat. It makes up almost half of the diet of ordinary Ukrainians and its share is growing. The third or three types of meat from the annual diet of Ukrainians has remained almost unchanged in recent years. In addition to poultry meat, it includes pork and beef. According to the Ukrainian Agrarian Association, poultry will continue to be the main component of the meat diet. Poultry production is expected to continue

to increase in the poultry industry. A catastrophic reduction in the number of livestock and insufficient measures to prevent the spread of African swine fever in pig farming led to a reduction in pork production. However, the demand for pork in Ukraine is traditionally high, and this leads to a further increase in prices for it, which in turn, together with a relatively short production cycle, will encourage manufacturers to increase the rate of pork production [36].

The OECD/FAO forecast for 2020-2030 highlights pork as the second most popular meat in the world after poultry. In the structure of meat consumption in the world, pork accounts for 34% of the total volume, and the share of poultry meat is 41% [4].

Some of the identified trends may be related to changes in the diet of consumers and demand in general. M. Trajer & M. Mieczkowski [37], describing general trends in meat consumption in Poland, identified relatively stable pork consumption with a temporary decrease in some years and the replacement of beef consumption with poultry meat. This trend is described as a result of a high level of price competitiveness, dietary properties, and dietary changes in favour of low-calorie, low-fat options [37].

N. Jurkenaite & A. Syp [38] note that price shocks in the beef and poultry markets can be transferred to the pork market and vice versa. There have been several price shocks in pig farming caused by various crises (outbreaks of African swine fever, changes in feed costs, and changes in animal welfare standards) [38]. Many participants in the pork market face price risks of the product, especially producers, processors, and merchants. Price volatility is a key aspect of the risk associated with lower prices for agricultural products. One of the reasons for price instability is inflation. Other reasons include changes in supply and demand, consumer income, and consumer price expectations [21].

To mitigate fluctuations in various types of pig meat prices and maintain the stability of the pork market, the Central Government of China has taken a number of price control measures. In general, a system of tools for controlling the prices of pig meat in China has been established. The overall design of pork price control policies is relatively reasonable, but there are still challenges. In particular, the subject of China's policy of controlling the price of pork is the same, so it is difficult to form a resulting force. The policy focuses on price regulation in the short term, but ignores long-term adjustments to the industry structure. In particular, the emphasis is on market surveillance, but insufficient support for pig slaughter and processing. The policy focuses on production and management to improve the quality of pig development and efficiency, but does not consider social justice. It is advisable to ensure an interdepartmental division of labour and close cooperation; adjustment of the industrial structure of pig farming; establishment of a mode of operation of slaughter and processing at the production site to reduce the cost of pig farming turnover; ensure pork consumption by low-income groups, considering social efficiency and justice [39].

The study suggests that the key obstacle to the development of the pork market is the lack of regulation of economic relations between all participants in its supply chain.

Thus, the problem of pricing for agricultural products in Ukraine is not only within the interests of both its direct producers and processors, exporters, traders, etc. It has a much broader meaning. On the one hand, for ordinary citizens, it determines the price availability of ensuring daily food needs, which is basically formed in the prices of agricultural products. And this, in turn, affects the parameters of ensuring food security of the state. On the other hand, the problem under study is one of the main criteria for the competitiveness of domestic agricultural products both in the Ukrainian and global markets [40].

It is worth emphasising that the prices of the pork market in Ukraine completely repeat the trends that have developed in the world meat market. In the future, prices for incoming resources and the solvency of the population will determine the further price situation on the pork market in Ukraine.

Conclusions

Pork is one of the main food products. It has its own culture of consumption, which has been established for thousands of years. The demand for pig meat in the world is growing, which is conditioned by both the growth of the world's population and the economic development of individual countries. The pork market in Ukraine is traditional and plays an important role in providing the population with meat and meat products.

Analysis of the volume of pig raising in live weight by farms of all categories indicates their slight reduction. It is noted that in agricultural enterprises, the volume of raising pigs in live weight is growing. Households in 2017-2021 reduced the volume of pig raising. It is proved that technological and economic factors affect the volume of sales of pigs in live weight.

The results obtained confirm a steady upward trend in all types of prices on the pork market. The global market already has a significant impact on the level of purchase, wholesale and retail prices in Ukraine.

It is established that the purchase price for pigs of categories I and II for 2017-2021 increased by 1.6 times. Analysis of wholesale and retail prices for category II pork over the past 5 years confirms their increase by 1.7 times to 91.76 UAH/kg. It was determined that the consumer price of pork in 2021 was 1.6 times higher compared to 2017. At the same time, the consumer price of lard has undergone major changes. In the analysed period, it increased by 2.3 times.

It is proved that the future price situation for pork will depend on changes in the main factors. In particular, the volume of domestic production of pig meat, the volume of poultry meat available on the market and the purchasing power of the population.

Promising areas of further study are determining the influence of factors on the cost of production, assessing changes that occur during the formation of supply and demand, analysing the competitive environment and export-import operations in the pork market.

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Цінові тенденції ринку м'яса свиней

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Анотація. Галузь свинарства та ринок м'яса свиней займають важливе місце у забезпеченні населення, як світу, так і України основними продуктами харчування. Економічний розвиток окремих країн світу та зростання населення збільшують попит на м'ясо свиней, що зумовлює нарощування обсягів його виробництва. Свинарство України є історично сформованою, традиційною галуззю. Проте її сучасний стан не забезпечує сталого та ефективного виробництва свинини в Україні і потребує суттєвого покращення. Метою статті було вивчити цінову ситуацію, що склалася на ринку м'яса свиней та аргументувати фактори, що її спричинили. У процесі виконання досліджень було використано комплекс методів: монографічного, ретроспективного, порівняльного аналізу, абстрактно-логічного, індукції та дедукції, графічного, які дозволили виявити та обґрунтувати існуючі цінові тенденції ринку м'яса свиней. Здійснено аналіз обсягів вирощування та реалізації м'яса свиней основними виробниками у живій масі, а також цінової ситуації на ринку м'яса свиней у 2017–2021 рр. Особливий акцент зроблено на деталізації закупівельних, оптово-відпускних та споживчих цін у різних областях країни. Доведено стійку тенденцію зростання цін на ринку м'яса свиней. Встановлено, що в Україні впродовж 2017–2021 рр. відбулося зростання у 1,6–2,3 рази всіх видів цін на м'ясо свиней. Результати проведених досліджень містять аналітичні матеріали та теоретичні обґрунтування, які розширюють знання щодо цінової ситуації на ринку м'яса свиней. Одержані матеріали можуть бути використані всіма зацікавленими особами та спеціалістами для врахування у виробничій діяльності та для подальших наукових досліджень проблем формування та функціонування ринку м'яса свиней

Ключові слова: цінова ситуація, закупівельна ціна, оптово-відпускна ціна, споживча ціна, попит, свинина