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THE ROMANIAN WHEAT MARKET AND THE BEHAVIOR OF THE INDIVIDUAL AGRICULTURAL PRODUCERS – AN ECONOMETRIC APPROACH

ABSTRACT

The investigation aimed at a better understanding of the bakery cereals market (sector inquiry) and had the objective of highlighting the organization of the bakery cereals sector, the functioning and the mechanisms of this sector. As it was a sector inquiry, its purpose was to provide an image of the competition mechanisms and to create a working instrument for the future analyses of the bakery cereal market for the Competition Council and for other interested parties.

Key words: wheat market, questionnaire, econometric estimations, performance, bargaining power.

JEL Classification: C1, Q12, D2.

1. GENERAL DESCRIPTION

This investigation was carried out in the period September 2007 – December 2008 and focused on the wheat market, because it holds a paramount weight in the analyzed sector and because the results can be easily extended to the other markets that are part of this sector. This approach is a novelty taking into account the object of the research, as it is the first investigation carried out by the Competition Council, aiming at a better understanding of a market that involves an agricultural product. Furthermore, the market of wheat storage services was analyzed. These services have a crucial importance in the operation of the wheat market, mainly as a result of the effects on the wheat supply behavior.

2. STATE OF KNOWLEDGE

The bakery cereals market has been the object of investigation by several institutions of the public administration, the research sector, the academic environment, etc. Taking into account the competition rules, the present approach is a novelty. The conclusions of the study are also supported by the econometric arguments concerning the different behaviors of the economic operators activating

on this market. The study is available at the following web address: www.consiliulconcurentei.ro/publicatii/publicatiirecente/raportul_investigatiei_utile_pentru_cunoasterea_pietei_cerealelor_de_panificatie.

3. MATERIAL AND METHODS

The research was based on the analyses of the legal framework, as well as on the different data and information, available from public sources. Furthermore, information was collected from the questionnaires filled in by the main economic operators activating in the sector and from a representative sample of individual producers. At the same time, different econometric methods, relevant for explaining certain economic trends, were also used.

Some researchers are investigating the demand function - the manner how the quantity of a needed good depends on the price of the respective good and on other factors. This approach is useful when, for example, the aim is to calculate the value of the demand elasticity coefficients of a product in relation to the price of certain substitutable products, in order to see the substitutability level of the investigated product. Other economists are investigating the reverse function of the demand, where the price of the analyzed product depends on the quantity. Both approaches, the estimation of the direct demand function and the estimation of the reverse function, are valid; choosing one or the other depends on the aim of the analysis.

In our case, we chose the second approach because we are interested in the factors related to the wheat market price. Thus, we take into account the situation when the *price* variable (P) is the depended variable, explained by the *quantity* variable (Q), and by a *binary* variable (D), presenting the organizational modality of the buyer and thus its influence over the selling price. It could be said that this is an extremely simplified and nonrealistic model, also according to Koopmans (1957), but it is better to start with a simplified model for obtaining the essential characteristics of the analyzed phenomenon, and to further continue by using more sophisticated models, constructed from the simplified one.

By its nature, the binary variable D takes the value 0 when the buyer is a natural person and the value 1 when the buyer is a legal entity (thus, the buyers - natural persons are the basic group). When, after estimating the econometric model, the coefficient of the binary variable D is statistically negative, the conclusion is that the price differences resulting from the answers of the individual agricultural producers do not have a stochastic nature.

As a result, the linear regression model is

$$P = \beta_1 + \beta_2 \cdot Q + \beta_3 \cdot DUM + \varepsilon, \quad (1)$$

where ε , the error of the model is a random variable having a normal distribution.

The estimation of this regression will generally lead to a negative coefficient of the variable Q . However, because of the simultaneity of the demand and supply

formation on the market, the result cannot be interpreted as representing the demand of the certain product, but a combination between the demand and supply – more details can be obtained in Kennedy (2008), p. 371.

We use the two-stage least squares method (2SLS) in order to eliminate the simultaneity effect over the two estimated coefficients. This method allows a proper estimation of a linear model where one or more independent variables have endogenous characteristics (such is the case of variable Q in the present model). Using the 2SLS method requires the identification of a variable strongly correlated to variable Q , but not correlated with variable P (implicitly, not correlated with variables D and ε). A variable meeting these conditions is the *wheat-cultivated area*. The sold quantity is naturally related to the cultivated area, and the 0.83 correlation coefficient for these two data series indicates a very powerful relation.

Another way of testing the correlation between variables Q and S is to use a regression through the ordinary least squares method (OLS), where the explained variable is Q , and the explaining variables are the exogenous variables from the equation (1) (DUM), as well as the instrumental variables (S):

$$Q = \delta_1 + \delta_2 \cdot DUM + \delta_3 \cdot S + v, \quad (2)$$

where v is a random variable with a normal distribution.

This is what the Eviews¹ equation is used in the first step of the process of estimating the parameters through the 2SLS method. The necessary condition for variable S to be used as an instrumental variable is that the value of the parameter δ_3 must differ significantly from 0 (zero).

4. RESULTS AND DISCUSSIONS

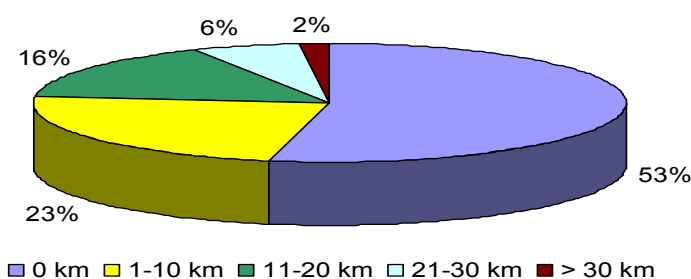
During the investigation aiming at a better understanding of the bakery cereals market, certain signals on the possible existence of special characteristics with regard to the individual producers (that generally operate small land areas and do not have their own storage capacities) were received. These characteristics are mainly related to the dependence of the individual agricultural holdings on certain wheat buyers and depositors, to the need of selling the wheat at harvest time, to the lack of access to commercial information, compared to the larger agricultural holdings (for instance, to information related to the price evolution on the foreign markets) and to the inefficiency of long distance transportation of the harvested wheat. In order to check up if these signals are true, the Competition Council conducted a survey addressed to the individual agricultural producers.

The survey was based on a questionnaire addressed to the individual agricultural producers. However, in order to compare the different types of individual producers, the questionnaire was also applied to a low number of economic operators legal entities, which operate larger areas.

¹ The econometric package used in this study.

The questionnaire was conducted in the period 22.08 – 05.09.2008, aiming at obtaining and processing data concerning the various stages in the wheat production process, as well as information on wheat sales, transport and storage. A special attention was paid to the relevance² of the sample used in this questionnaire-based research.

One of the questions related to the maximum distance the respondent is willing to transport its wheat, in order to sell it. Based on the answers received to this question, it was concluded that, on the average, in order to sell their production, the individual agricultural producers are willing to transport the wheat on a distance of maximum 7 km from the harvest place.



Source: Own processing of data resulting from the survey conducted by the Competition Council.

Graph 1. The maximum distance the individual agricultural producers are willing to transport their wheat harvest in order to sell it.

The answers reveal that 53% of the individual agricultural producers wish to sell their wheat production in the nearest area from the harvest place, as it is shown in Graph 1. They are not willing to transport the wheat probably because their financial power does not permit to bear related costs. It is worth mentioning that only 8% of the respondents are willing to transport the wheat to a distance greater than 20 km from the place of harvest, in order to sell it.

The questionnaire designed by the Competition Council and mostly applied to the individual agricultural producers contained various questions aiming at obtaining data regarding the existing mechanisms on the primary market of wheat commercialization. Some of these questions related to the level of producer costs in the agricultural year, which are generated by specific activities in this field. In this respect, Table 1 presents certain information regarding the initialization costs (costs of the seeds, plowing, disking, and seeding), the maintenance costs (costs of fertilizers, herbicides application, agricultural insurances) and the harvesting costs, as well as information on the areas cultivated by the respondents.

² This represents the quality of the sample to be representative for the general population structure.

Table 1
Statistical indicators on the individual agricultural holdings

Indicators	Cultivated area (hectares)	Initialization expenses (Lei/hectare)	Maintenance expenses (Lei/hectare)	Harvesting expenses (Lei/hectare)	Total expenses (Lei/hectare)
Average value	2.4	798.4	277.8	276	1,320.6
Median value	2	856	250	208.4	1,370
Modal value	1	1,000	300	295.5	900
Minimum value	0.5	80	0	188.9	320
Maximum value	5	1,800	850	327.7	2,500

Source: Own processing of data resulting from the survey conducted by the Competition Council.

It must be mentioned that the average value of the areas cultivated by the individual agricultural producers, which were included in the sample by the Competition Council, i.e., 2.4 hectares, is very close to that calculated by the National Institute of Statistics and presented in Romania's Yearly Statistical Yearbook, 2008. This fact supports the previous argument on the relevance of the sample used in the survey.

As regards the possibility of negotiating the selling price, the answers provided by the individual agricultural producers reveal that when the sale takes place at the harvest point or when the buyers are legal entities (firms), most often the price is not negotiated, and the sale is made at the price proposed by the buyer. If we corroborate this fact with the maximum distance the individual agricultural producers are willing to travel to sell their wheat production, we reach the conclusion that in over 70% of sales, no price negotiation takes place.

The data also reveal a natural direct proportionality relation between the wheat cultivated area and the distance where the agricultural producers are willing to sell their harvest – the correlation coefficient for the two data series being positive. Thus, the individual agricultural producers willing to pay for the transportation costs for a maximum distance of 10 km in order to sell the wheat production cultivate wheat on an average area of 3.2 hectares. The individual agricultural producers willing to sell the wheat at a distance over 10 km, but less than 20 km, represent 16% of the number of respondents; these cultivate wheat on an average area of 5.1 hectares. Only 2 % of the individual producers are willing to sell their wheat production at a distance of more than 30 km from the harvesting place; in this case, their average area cultivated with wheat is of 9.6 hectares.

In these circumstances, we can reach the conclusion that there is a low capacity of efficiently bearing the costs of long distance transportation of small wheat quantities, mainly for the agricultural producers cultivating wheat on small areas³. As it has been mentioned above, the individual agricultural producers have

³ The data analysis revealed a strong direct proportionality relation between the wheat cultivated area and the sold wheat quantity, as it was expected.

a low financial power, which increases their dependency on the weather conditions and on the other market players; thus, their possibility of action is reduced. Even if the national legislation encourages the association of the agricultural producers, with the aim of overcoming these difficulties, the reality proves that there is a strong resistance to such associations, probably because of the past negative experiences related to the production agricultural cooperatives from the communist period.

The defining characteristics of the individual agricultural producers are confirmed by the data obtained through the survey conducted by the Competition Council. This fact could justify the definition of a distinct market segment or even of a relevant market where the supply comes from individual agricultural producers. This would be a different market from that where the supply comes from commercial companies, which have an increased financial power and thus a higher bargaining capacity⁴. In most cases, the asymmetry of the bargaining power compels the individual producers to accept the price and the other conditions offered by the buyers, situation which is similar to the adhesion contract⁵.

⁴ The situation when one of the parties in a commercial transaction has, to a certain extent, a superior power compared to the other party, is a very common one; the tendency of the first party to use this situation for its own benefit is a natural one. However, it is obvious that certain abuses can appear from the parties with a higher bargaining power. Such abuses can consist of imposing very low prices or certain extremely less favourable conditions for the other part. In most jurisdictions, including the United States of America, the European Union and many of its Member States, including Romania, the antitrust legislation does not sanction the abuse of higher bargaining power *per se*, in the absence of a dominant position on the market. The main economic reasons for not sanctioning such abuses, if there is no dominant position on the market, are very well synthesized by the response of the U.S.A. to the questionnaire addressed on this issue by the International Competition Network:

- The antitrust legislation aims at protecting competition and not certain economic operators (in the present case, the parts in an economic contract that have a lower negotiation position).
- It is less probable for the contractual provisions, between parties located in different points of the production-distribution chain, namely companies that are not under direct competition, to have anticompetitive effects.
- The higher bargaining power can be the result of higher economic efficiency, and this fact cannot justify the intervention of the public authorities in private contractual relations. Thus, the intervention could generate inefficiencies and could lead to increased prices for the final consumer. Yet there are jurisdictions (for example, Japan, Austria, Germany, Italy etc.) where the abuse of higher bargaining position is sanctioned by the antitrust legislation; the main reasons for such an approach are:
- Imposing extremely unfavorable conditions to commercial partners by those who have a higher bargaining power, conditions that would have not been accepted in a normal competition situation, diminishing the capacity of competing on the market for the partners with low bargaining power;
- The need of protection against the practices exploiting the lower position of the economic operators, by similitude with the final consumers protection in the relation with their contractual partners.

⁵ The adhesion contract is a contract wholly drafted (or almost wholly drafted) by one of the parties. This type of contract is offered to the other party for acceptance, without any possibility to modify the contractual clauses.

Generally, the demand on the wheat market is represented by the milling and baking factories, by the traders and the wheat storage firms. Thus, on the primary market of wheat commercialization, the demand is represented by the traders and the processing entities, whereas at the next level after wheat commercialization, the demand is generally represented by the processing companies exclusively. Among the main traders on the Romanian wheat market, we can list Cargill, Glencore, Toepfer, Nidera and Agricover.

The value of the demand elasticity coefficient was calculated in relation with the price of this product⁶ in the period 2006–2007, as it is indicated by the data from Romania's Yearly Statistical Yearbook. The calculation revealed a value of -0.014 , meaning that the wheat demand is relatively inelastic (in the case of a certain percentage variation in the wheat price, the quantity requested by consumers has a lower percentage variation). The fact that the wheat demand is relatively inelastic is not a surprising result, taking into account the above-mentioned facts (bread is a basic element in the Romanian people's diet, and about 85% of the domestic wheat production is used by the bread manufacturing sector).

For the same period, namely 2006–2007, the demand elasticity coefficient for wheat and other cereals, as well as for their final products, was calculated in relation with the income⁷.

The data from Table 2 support the statement that cereal consumption is traditionally a crucial component in the Romanians' diet; the demand for these products is inelastic in relation to the income. The values less than one of the elasticity coefficients indicate that the wheat and cereal products are strict necessity goods for the local consumers, even if a decreasing trend in total consumption can be noticed.

From the very beginning of this sector investigation, the Competition Council received signals concerning the existence of a net difference between the bargaining power of the small producers and that of the wheat demand carriers, organized as legal entities (millers, traders and storage firms). In order to check this up, as well as for the purpose of other issues of interest, appropriate econometric methods were used.

⁶ The elasticity coefficient of the demand in relation with the price (e_p) is calculated as ratio of the percentage modification of the requested quantity to the percentage modification of the respective product price. The coefficient is a negative number.

⁷ The elasticity coefficient of the demand in relation to income (e_v) is calculated as a ratio of the percentage modification of the requested quantity to the percentage modification of the income. In most cases, $e_v > 0$, so, the product is considered normal. However, e_v can be negative; in this case the product is considered inferior. Pay attention! The goods are considered inferior or normal from the perspective of the consumer theory, and not from the quality point of view. Also based on the elasticity coefficient value, the goods are classified as goods of strict necessity or indispensable goods (when $e_v < 1$) and luxury goods (when $e_v > 1$).

Table 2
The demand elasticity in relation to income for cereals and final products

Type of products	The demand elasticity in relation to income
Cereals and cereal products, grain equivalent	-0.03
Wheat and rye, grain equivalent	-0.07
Cereals and cereal products, flour equivalent	-0.05
Wheat and rye, flour equivalent	-0.07
Bread and bakery products	-0.12
Flour	-0.11
Pasta	0.06

Source: Own processing of data from Romania's Statistical Yearbook, 2008.

Another point of interest in the survey was to compare the price of wheat paid by a legal entity to the price of the wheat paid by a natural person. The answers indicated that, on the average, the unit selling price to legal entities is significantly lower compared to the unit selling price to natural persons (480.2 lei/ton compared to 546.3 lei/ton) (Table 3).

Table 3
The sold wheat price and quantity, in relation to the type of buyer

Indicators	The price paid by ...		The quantity sold to...	
	Natural persons (lei/ton)	Legal entities (lei/ton)	Natural persons (tons)	Legal entities (tons)
Average value	546.32	480.19	9.68	44.44
Median value	500	500	5	10
Minimum value	390	220	1	1.5
Maximum value	750	600	50	600
Standard deviation	107.55	62.2	10.73	105.17

Source: Own processing of data from the survey conducted by the Competition Council.

The table also indicates that the prices paid by the legal entities have a standard deviation of 62.2 lei, compared to a standard deviation of 107.55 lei in the case of the natural persons. A lower standard deviation means that we are witnessing a larger concentration around the average value and, as a result, a narrower variation compared to this average value. The difference between the two standard deviations supports the hypothesis of a significant difference between the bargaining power of the wheat buyers as legal entities and that of the individual agricultural producers.

Taking into account the above-mentioned characteristics of the wheat market, the individual agricultural holdings are the main suppliers in the harvest time. Cross-section data were used (data from different statistical units that refer to a certain moment in time) for estimating the wheat demand function.

The next step was to test if the noticed difference in the selling prices has or does not have a stochastic nature. Thus, we have tried to econometrically estimate the (reverse) wheat demand function, when the sellers are individual agricultural producers, and to test the significance of the difference between prices.

We present below the results of estimating equation (2):

Variable	Coefficient	Std. Error	t-Statistic	Prob.
<i>C</i>	551.7142	20.44370	26.98700	0.0000
<i>S</i>	-0.471235	0.205391	-2.294327	0.0238
<i>DUM</i>	-63.00155	20.95333	-3.006755	0.0033
R-squared	0.187631	Mean dependent var		497.6604
Adjusted R-squared	0.171857	S.D. dependent var		81.66912
S.E. of regression	74.32084	Akaike info criterion		11.48255
Sum squared resid	568929.5	Schwarz criterion		11.55793
Log likelihood	-605.5753	Hannan-Quinn criter.		11.51311
F-statistic	11.89483	Durbin-Watson stat		0.323516
Prob(F-statistic)	0.000023			

The value of the parameter δ_3 is of -0.47 , with a probability associated to the t test below 5% (2.38%). However, we shall verify if the value of δ_3 is significantly different from 0 (zero) by using a Wald test, as well:

Wald Test:

Test Statistic	Value	df	Probability
F-statistic	5.263938	(1, 103)	0.0238
Chi-square	5.263938	1	0.0218

Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
$C(2)$	-0.471235	0.205391

Restrictions are linear in coefficients.

The null hypothesis is: $c(2) = 0$, where $c(2)$ is the second parameter of the equation (2) (namely δ_3). Eviews reports two tests (F, and Chi-square), and the associated probabilities. Because the restriction imposed to the coefficient $c(2)$ is linear, we shall focus on the F test. The associated probability to this test is below 5%, meaning that the null hypothesis is rejected, and thus the value of δ_3 is significantly different from 0.

We next present the results of estimating equation (1) by using the 2SLS method:

Variable	Coefficient	Std. Error	t-Statistic	Prob.
<i>C</i>	548.8671	13.98511	39.24652	0.0000
<i>Q</i>	-0.263122	0.095601	-2.752302	0.0070
<i>DUM</i>	-56.98053	16.60359	-3.431821	0.0009
R-squared	0.198103	Mean dependent var		497.6604
Adjusted R-squared	0.182533	S.D. dependent var		81.66912
S.E. of regression	73.84024	Sum squared resid		561595.3
F-statistic	12.05017	Durbin-Watson stat		0.340792
Prob(F-statistic)	0.000020	Second-Stage SSR		568929.5

By synthesizing these results, the data reveal that equation (1) becomes:

$$P = 548,87 - 0,26 \cdot Q - 56,98 \cdot D + \varepsilon \quad (3)$$

The value of the quantity coefficient is negative and this is in accordance with the economic theory (the quantity demanded is inversely proportional to the selling price). Moreover, all the coefficients are statistically significant; the probability associated to the *t* test for the variable included in the model is less than 0.01, meaning that every coefficient is statistically significant, even when the significance is 1%.

The value of the parameter β_1 within the equation (1) is of 548.87 lei, and this value is the wheat medium selling price paid by the basic group, for which the binary variable takes the value 0 (as a result, the medium selling price paid by the natural persons). The coefficient of the binary variable *DUM* is the difference between the price paid the buyers - legal entity and the price paid by the buyers – natural persons. As the value of this coefficient is of –56.98 lei, we can state that, on the average, the legal entities paid by 56.98 lei less per ton of wheat compared to the natural persons.

As regards the difference between the prices paid by the natural and the legal entities, the results show that this difference is not a result of random factors, but it is explained by the buyers' organization modality. Moreover, the value of the price difference between the two categories of buyers is significant; the probability associated to the *t* test for the coefficient of the binary variable *DUM* is 0.001.

The present analysis demonstrates that the bargaining power of the buyers as legal entities is significantly higher than that of the individual producers and this type of buyers benefit from significantly lower prices.

This higher bargaining power can be the result of higher economic efficiency and thus no intervention from the part of the public authorities is needed. As a result, the intervention could generate inefficiencies and could lead to increased prices for the final consumer.

5. CONCLUSIONS

Both in the bakery wheat sector and in the sector of wheat storage services, the price formation is on a free basis, as a result of the interaction between the supply and the demand, with no direct intervention from the State in this price formation mechanism. However, on the market of wheat storage services, in 2004 and 2005, two public interventions took place in the price formation process; these interventions were facilitated by the mechanism of subsidizing the wheat storage costs. Our opinion is that such public interventions can lead to price alignment effects for the supply carriers; for this reason we appreciate that such interventions no longer took place (under this form) after 2005.

The analysis of the market, generically named the market of bakery wheat production and commercialization, did not identify significant entry barriers. However, we can state that there are important scale economies on this market and that the economic operators integrating more types of sector specific activities benefit from significant competitive advantages, as a result of this activity diversification. In general, in the investigated period, the integrated operators had a profitable activity, or at least had the possibility to reduce their losses; this was the result of the size of their activity, which led to lower unit costs, mainly through the diminution of the transactional costs, as well as of the possibilities to equilibrate the losses experienced in a certain activity by using the profits obtained in another activity.

A defining characteristic of the bakery wheat market, even of the whole agricultural sector in Romania, is the fragmentation of agricultural properties, which generates an extremely large number of individual agricultural holdings (very small-sized holdings). This fragmentation has a direct impact upon the efficiency and the profitability of the sector.

Another characteristic of the wheat market is represented by the asymmetry of the bargaining power between the individual agricultural producers, as supply carriers, and the market demand carriers; this asymmetry has a significant influence upon price formation. This situation is relatively similar on the wheat storage market, where the small agricultural producers are the demand carriers for these services. However, we do not consider that a public intervention is necessary for attenuating this asymmetry (as long as no anti-competitional practices have not been identified); we consider that the only plausible results of such an intervention

would be competition distortion and the slowing down or even blocking of the agricultural property consolidation process and of the effort to increase this activity efficiency.

Last but not least, the Romanian wheat market seems to be largely affected by the *black market*, which is considered to have quite a large share by many market players. We consider that in order to limit and eradicate this phenomenon that induces market operation distortions, the responsible authorities should identify more efficient control methods in wheat production and transactions.

Naturally, price formation on the bakery wheat market is strongly influenced by the situation on the international markets and by the quotations on the foreign commodities exchange markets. This influence can be explained by the possibility to transport the wheat production over long distances and by the high weight of the international wheat trade.

The direct intervention of the State, which can make available large quantities of wheat from the State's Reserve in order to refresh the stocks or for covering the wheat deficit in certain moments, can also have an influence over the price on the bakery wheat market. Our opinion is that although such interventions are permitted by the specific legal framework, making wheat available from the State's Reserve through wheat loan mechanisms favoring only certain operators selected by direct negotiation, distorts competition, especially by creating an economic and financial advantage for the selected operator. This is true mainly in the conditions when the loan is contracted in the final period of the agricultural year – when the prices are high, and the wheat restitution is made at the beginning of the next agricultural year, when prices reach the lowest level. As a result, we recommend the alternative of using wheat sale-purchase mechanisms, so as to refresh the reserves through open, transparent and non-discriminating methods.

From the perspective of relevant market definition modality, the analysis revealed the criteria and the specific aspects to be considered in the definition of the relevant markets in the cases when Competition Law no. 21/1996, republished, was infringed. Certain specific characteristics of the product could justify the definition of distinct markets of the common and durum wheat, on the basis of the individual characteristics of the investigated case.

We must underline that, taking into account the extremely low bakery wheat substitutability, the possible price agreements can produce far-reaching effects on the respective market as well as on the downstream markets. These effects can be amplified by the prices asymmetry, which is a characteristic of the agricultural markets, the market of wheat production and commercialization included. The result consists in increased prices of the downstream products, with the wheat price

increase, as well as in maintaining the prices of the downstream products at high levels, in the case of wheat price diminution.

At the same time, because of the asymmetry in the bargaining power and of the different behavior of the individual agricultural holdings in the relation with the institutional producers, in certain circumstances the segregation of the relevant product market can be justified depending on the different categories of suppliers, namely considering a distinct relevant market – the market of the first bakery wheat commercialization.

Furthermore, the study demonstrates that the market of wheat storage services is characterized by the existence of certain significant legal barriers to the entry on the market; these barriers are explained by the need of quality services, by the importance of this service in the wheat transactions, considering that the warehouse receipts are titles negotiated on the commodities exchange market.

A relative large number of operators are activating on the market of wheat storage services, yet there are certain areas on the Romanian territory that are covered by a single economic operator. As regards the tariffs on this market, a slightly increasing trend was noticed in the investigated period.

Referring to the modality of defining the relevant market, on the basis of the investigated circumstances, the wheat storage service could be defined as a distinct market or it could be included in the relevant market of cereals storage services, considering that, at least from the supply perspective, the services are substitutable. In any of these situations, the geographical area where competition is present is a circular area around each warehouse, with a radius evaluated at 25–60 kilometers by the supply carriers. In this case, too, on the basis of the analyzed characteristics, a definition of a relevant market for the product can be also considered in relation to the individual agricultural holdings.

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