Shaping Agribusiness and its Impact on the Competitive Environment of Agricultural Enterprises

VĚRA BEČVÁŘOVÁ

Prof. Ing. Věra Bečvářová, CSc. Mendel University of Agriculture and Forestry Brno, Czech Republic, E-mail: becv@munro.cz

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ABSTRACT
The paper deals with the key issues of contemporary food system development and their economic content related to the position of agricultural enterprises. It explains, that the problem faced by the whole Europe and thus also by the Czech Republic, i.e. how to compete successfully on an increasingly globalised food market, fully concerns the shaping of a new agriculture structure and all its sectors, which are more-or-less related to the food and non food sector based upon agricultural raw materials production. By generalising the typical features in the running integration processes within this economy segment, essential tendencies of changes in the present-day business environment which affect both the supply and demand sides of market formation, concerning production, processing and merchandise of food are characterised. New challenging approaches for agricultural enterprises as well as from the the CAP regulation policy point of view in this business branch are evaluated there.

Keywords: agribusiness, agricultural enterprise, competitiveness, decoupled payments, structural change

1 INTRODUCTION
The stage when the Czech Republic as well as other Central and Eastern European countries entered the EU was marked by the fact it brought the largest historic expansion of the EU, but also by the fact that Europe faced the problem of determining its own way ahead, a way allowing for the potential of high competitiveness and economic efficiency in the global world and, at the same time, keeping social cohesion within the EU welfare system.
This fact also fully concerns the shaping of a new agriculture structure and all its sectors, which are more-or-less related to the food production sector.
Nowadays, we have the opportunity to see the positives and negatives of the common market and its regulation in practice and know that options for choosing specific tools and methods of solutions reflecting specifics of individual member countries are available even within the centrally prescribed EU limits. Every day, we can see that significant regional and structural differences are still hidden behind aggregated data about average economic performance of the economic system of the EU and those different approaches and priorities for solutions to individual issues can be chosen, provided that the issues have been identified and assessed in an objective manner.
This is because the economic development in both old and new member countries is ever more significantly influenced by external influences and processes related to changes in the world economy that affect all economic sectors. These influences become new impulses determining the direction and dynamics of development of the economic environment; if we intend to preserve or improve our competitive strength, it is necessary to adequately respond to them.
The most significant processes those currently influence the world economy and, to a large extent, all of civilization, are undoubtedly globalisation processes. Although they penetrate the entire structure of society, they are primarily perceived through changes in economy and individual sectors thereof. It is thus logical that the effects of globalization processes are
reflected in changes in the entire system of the production, processing and distribution of foodstuffs.

Agribusiness shaping processes are typical of the inclusion of companies in many sectors that more or less participate in the production, processing and distribution of foodstuffs into a self-contained system. In this process, the influence of finalizing segments (processing and distribution) during the shaping of demand for raw products grows, from the perspective of structural and economic characteristics, and affects the allocation and the level of utilization of production factors, which fact is also reflected in the potential development of individual regions with much broader economic, social and political consequences.

These changes are of such importance that they give a new shape to agrarian markets in entire foodstuff chains, change criteria in the selection of economic tools accepting new conditions of development, and require the acceleration of reform processes and a new concept of agrarian policies in this context. Our own experience with the implementation of the common agricultural policy of the EU (hereinafter “the CAP”) confirms that the changing environment excludes the solely passive role of recipients of existing subsidies, historically designed market rules and regulatory measures. The environmental and economic conditions are changing.

In practice, the acceptance of the consumer concept in the policy and the shift of focus to the finalizing segments of the processing and distribution of foodstuffs ever more significantly form a new and harder competitive environment of both food processing companies and agricultural companies. Ever more often, a limiting condition for the level and choice of the structure of agricultural production in the particular region is success in the sales of source agricultural products in the form of demanded final/food products on end consumer markets.

2 MATERIAL AND METHODOLOGY

The aim of the contribution which presents certain research as a part of the solution of a research task by the Faculty of Economics and Management of the Mendel University of Agriculture and Forestry in Brno is to characterize crucial signs of changes caused by the aforementioned processes in the agrarian sector and their consequences for achieving competitiveness of enterprises. To examine the influence of the shaping of agribusiness and its market structure on the position of agricultural companies and directly related segments in the field of the processing of agricultural products in this context from the perspective of achieving competitive advantages and the actual economic benefit in the conditions of the particular region. To use those findings and point out possible risks of creating a structure of subsidies within the preparation of individual axes of the new concept of the European structural fund in the conditions of the Czech Republic.

From the methodology perspective, the contribution is divided into two parts: the first part defines relevant criteria of the competitiveness of agricultural companies in current agribusiness and the second part focuses on the influence of the market structure on the prosperity of enterprises at the level of primary production and processing segments in the commodity vertical of agribusiness and the chance to participate in the creation of added value in final products.

3 DISCUSSION AND POLICY IMPLICATIONS

3.1. The principle of the latter-day competitiveness
Contemporary agriculture is far from being an enclosed autonomous system; not only due to the acceptance of its role in the sustainable development of society, but exactly due to the changes in the position of agricultural production within the foodstuff economy. It is this “production” function where the specialization of primary agricultural production into sectors is quickly overcome.

The process of expanding the agrarian market without significant barriers brings about many changes that positively influence the development of the particular segment of economy. In general, conclusions of theoretical works, analyses and studies related to this issue (e.g. Aghion 2001; Bečvářová 2001, 2004, 2006; Boehlje 1999; Connor 2003; Goldberg 1998) can be generalized in the following fields of arguments:

- *expansion to bigger markets* supports the differentiation of products and causes regional transfers of production capacities and the growth of production with the most efficient entities and thereby accelerates specialization and the related possibilities to achieve savings from large-scale production; at the same time, the potential and recoverability of utilized innovations increase;

- *increased competition* on larger markets supports and accelerates better allocation of production factors towards (the most) efficient activities and entities; this fact also creates better starting points for the increase of competitive strength on the world market;

- *larger common market and increasing competition* require but also facilitate faster technical and scientific development, the development of new products, processes, technologies and procedures through common (internationally linked) research and its application in practice in all national economic systems connected to this market.

If we define the competitiveness of a certain economic system as the ability to achieve results corresponding to the aims of the system and the dynamics thereof in a competitive environment, it is clear that a prerequisite for achieving unbiased aims, including the selection of criteria for the evaluation of the extent to which they were achieved, is the knowledge of the range of factors determining their fulfilment.

To assess the competitiveness of agricultural enterprises, we may choose at least two approaches related to the definition of the level of the economic system, the qualities (i.e. competitiveness) and behaviour of which should be assessed, which fact is related to the choice of the level of differentiation and examination criteria. From the perspective of method and methodology, we may choose an approach based on either

1. (1) inter-company comparison at the horizontal level of the particular stage of production or processing of the final product or
2. (2) prerequisites for participation in the creation of added value in the final product, i.e. from the perspective of successful participation of a company in the appropriate stage of the foodstuff verticals.

Option (1): *The analysis of competitiveness at the level of the differentiation of agricultural enterprises* is used more often and its methodology is more elaborated. In this case, it is especially the structure of commodities and its costs parameters confronted with the level of market prices, i.e. demand conditions, related to the criteria, factors and conditions of the development of the financial and economic efficiency of an enterprise that allow them to directly assess the level of competitiveness of a company and a significant context of its development, especially through inter-company comparison at the horizontal level within the agricultural sector.
Option (2): To define the range of crucial factors influencing conditions for fulfilling the aims of the particular economic system and the position of an agricultural enterprise from the perspective of its “production” function in the current conditions of agribusiness, it is also necessary to examine the competitiveness of the agricultural enterprise from the perspective of the acceptability of the structure and achieved economic parameters of production on the part of the market in a broader context, especially from the perspective of real vertical participation in the appropriate foodstuff production system.

Within this approach, it is necessary to consider the fact that the relevant market is constantly expanding with the majority of agricultural commodities. The relativity of assessment and the predictability of changes in the definition of regional markets (they currently often exceed national frontiers) is also related to this issue. A condition for achieving unbiased knowledge while using this approach is also assessment of the influence of the tools of agrarian policy that significantly distort conditions and possibilities to implement competitive advantages of enterprises on the agrarian markets. As a result, this approach to the assessment of the competitiveness of agricultural enterprises ever more often includes the analysis of the influence of a group of factors shaped by sector and national specifics or different conditions under which the agrarian sector achieved certain results.

In relation to methodological issues of the analysis of the competitiveness of agriculture, it is necessary to consider at least two other aspects:

- the possibility and the level of the production utilization of differentiated natural resources, where agricultural production should be allocated in production conditions enabling a price offer accepted by the market; with crucial commodities, price offer is currently ever more often determined by the conditions of the international market (and the tools of the agrarian policy) rather than by national or regional markets;

- the influence of the macroeconomic environment shaped by the overall level of the economic system, which influences agriculture in many respects, e.g. the availability, quality and prices of inputs, the qualification of labour, the level of technologies, the level of incomes of inhabitants reflected in the demand for foodstuffs, the level and forms of taxation and the legal framework defining the possibility to implement the market power of suppliers and related processing and distribution segments on the markets of agricultural products and foodstuffs.

The research into the economic efficiency of the agricultural and food economy from the agribusiness philosophy is based on the dynamic concept of competitive advantages of the entire system. The advantages are measured not only by the result of a relatively independent entity on a specific agrarian market that corresponds to the particular stage of the increase in value of the original raw product within commodity foodstuff chains, but also by the benefit resulting from the connection and mutual relationships of entities participating in the development, production, processing and distribution of foodstuffs within the entire process, i.e. savings of transaction costs of the appropriate commodity chains.

Within a specific region, bonds and especially the efficiency of directly related segments that process their production, i.e. usually food processing companies, are of importance for agricultural enterprises; the competitiveness of a food processing company, especially its successful participation in the appropriate foodstuff vertical and selection of the supplier of the source raw product, determines the actual demand on the market of agricultural products. The success of this interaction is one of the crucial factors influencing the structure and extent of agricultural production in the particular region, regardless of whether the processing company is located in this region or not. While regional affiliation of primary agricultural enterprises usually depends on the location of cultivated land, regional aspects are less
important in the relationship to related segments of the commodity vertical (also in the case of the relationship with primary processing enterprises) – economic conditions and bonds between producers and processing companies within a broader context of the relevant market are crucial.

3.2 The impact of agribusiness market structure

At the same time, market structure changes with respect to the position of entities at individual stages; this is also true with so far separately functioning markets of appropriate commodity verticais. They lead to a narrower collaboration of related segments, including the search for the most beneficial forms of connections, in order to increase the competitiveness of the entire chain (in practice, this is often done intuitively). The pressures on cost savings, on the one hand, and the efforts to control more stages of the foodstuff chain, on the other hand, are crucial motives causing consolidation at horizontal and vertical levels; in agribusiness, this especially applies to finalizing segments. Mergers, acquisitions, joint ventures and strategic agreements up to vertical integration take place; many inefficient segments are excluded from the market and disappear. This development often affects entities operating on regional markets.

The shaping of agribusiness, whether fully accepted in the structural and economic policies of individual countries or international groups or not, brings about new views of traditional approaches and the assessment of technical and economic efficiency of agricultural enterprises and the application of agricultural management systems.

The existing knowledge of economists dealing with the development of agribusiness in American, Australian and European conditions (e.g. CRAMER, JENSEN 1994; MUNDLAK, LARSON 1997; BOEHJE et al. 1999, 2002; SONKA 1999; DUNNE 2002; GRIEVINK 2003) as well as the results of our research into the conditions of transitive economic systems such as the Czech Republic (BEČVÁŘOVÁ 2003, 2005, 2006; LECHANOVÁ 2005, 2006) show that in current conditions, there are at least two crucial changes affecting the business environment of agricultural enterprises caused by this development.

The shift in focus on pre-production stages and finalizing processing and trade segments in commodity foodstuff chains face a more complex reality in practice. They change prerequisites of the competitiveness and development of the sources of revenue of agricultural enterprises and create new conditions for the success of the participation of other segments of commodity chains and the overall functioning of the chain itself. We perceive especially the following:

− growing influence of the market structure of agribusiness on the shaping of agrarian markets;
− expansion of control systems by finalizing segments and the enforcement of various forms of out-of-market coordination of activities within commodity foodstuff chains.

It is a known fact that market structure is primarily determined by the number of purchasers and sellers operating in the particular sector and their relative size (market concentration), the scope of differentiated products, the size of barriers of inputs and outputs to/from the sector, the advantage of large-scale production and the level of vertical integration and diversification.

Concentration and coordination in join links of agribusiness create incentives to exercise the resulting market power. In surveying our analyses, four domains of problems are necessary for study:
− influence on market prices to ensure lower costs to the buyer on the contractual side of the market;
− direct depression of producer prices increasing spread between the farm gate price and the wholesale or retail price of the product;
− discriminatory contracting practices that avoid the open market;
− imposing inequitable burdens on the producers.

Agricultural producers should answer the new economic environment. An interface in the framework of the whole agribusiness sector move production agricultural firms from one of perfect competition to one of imperfect competition to participate in some of advantage earning extra profit, for example:

− by adopting technology when farmers are no longer using identical information about production practices mediated the better competitive position among a large number of producers or groups of them,
− by contractual arrangements which provide farmers with production technology that is available to only a limited number of producers eliminates equal access to information and offers an advantage to those who possess and control it, as well as unequal access to market information and market opportunities information,
− by interface with value added processing firms that eliminates the characteristic of homogenous products; farmers involved in processing their commodities are no longer limited to selling that in a open market filled with ready substitutes.

If we use the definition of the term market power as the ability of an enterprise to influence the market price of goods or services without the risk of losing all customers and causing their departure to competing companies, it is clear that the manifestation of market power is related to a certain type (level) of market failure and can be characterized with the use of criteria determining the level of imperfection of competition that characterize the appropriate market structure.

The traditional market structure of the relatively independent sector of primary production – agriculture, which is often used in economic literature as an example of a sector with typical signs of perfect competition is given a new structure that eliminates the possibility to implement advantages of a perfect competitive environment due to the participation of other segments of agribusiness in the system. Market structure with signs of imperfect competition is typical of current agribusiness. The signs are present not only in sectors preceding or following primary agricultural production, but they also influence the business environment and the markets on which primary agricultural producers operate.

Research results in this context show that the influence of monopsony of the processing industry indirectly influenced by the relationship between the foodstuff industry and the trade industry usually exists in relation to primary agricultural production companies, i.e. on markets of agricultural products. A limited monopoly or bilateral oligopoly is typical of the relationship between foodstuff companies and the trade industry, i.e. the foodstuff market. Imperfect competition is also typical of markets with inputs where the influence and market power of the monopoly / oligopoly of supplier sectors can be identified. From the perspective of end customers, even the existing market structure of final segments of agribusiness shows as a positive element in the short-term period. Besides the influence of savings from large-scale production discussed below, Schumpeter’s hypothesis on the positive contribution of monopoly and oligopoly on the development of innovations and technological progress is confirmed on the markets of transitive economic systems such as the Czech Republic.
Contrary to the criticism of imperfect competition that is usually based on arguments about the inefficient allocation of resources and that is supported with analysis of the surplus of producers and consumers in the conditions of perfect competition and monopoly as shown in the diagram in Figure 1 and the related comment, the positives of such market structure are stated as well (see Figure 2).

Figure 1: Surplus of Producers and Consumers in the Conditions of Perfect and Imperfect Competition

Approach as above does not consider savings from large-scale production that enables the efficient use of technological innovations and better allocation of resources, a sign typical of concentrated production. The approach assumes that identical cost curves exist in both instances. However, in sectors participating in agribusiness, similarly as in other sectors of the economic system, implemented savings from large-scale production are based on mass, serial production and new technologies and cannot be fully implemented in the conditions of perfect competition.

In practice, the following situation occurs:

Figure 2: Surplus of Producers and Consumers Reflecting Savings from Large-scale Production

Compared to a concentrated sector, costs curve of a perfectly competitive environment moves to the left and the market price of production ($P_{DK}$) is higher than market price ($P_M$), while...
supplied quantity \( (Q_{DK}) \) is lower than produced quantity \( (Q_M) \). Another positive feature is the higher productivity of work based on the modernization of production facilities and faster application of the results of research and development in big enterprises with strong capital that rationalize the production process and other operational activities. Under these conditions, the surplus of consumers and producers in perfect competition is lower than in the case of monopoly. The result is that in an imperfectly competitive environment, theoretically speaking, consumers could achieve higher gains from consumption than on a perfectly competitive market.

Interpretation is a much more complex problem, though from the perspective of agricultural producers as suppliers of raw products, the influence of market structure on the market of agricultural products in the environment of a limited monopoly or a bilateral monopoly / oligopoly is crucial. In this case, the market power of big food companies manifests itself through deformed conditions of demand for agricultural products, including negative influences on the formation of prices paid to farmers.

*To increase the competitiveness of agricultural products within the given market structure of agribusiness, one of the crucial options is the optimisation of production areas and numbers of livestock, including (technologically well-handled and economically justified) concentration\(^1\), which enables advantages to be utilized from large-scale production, innovations and state-of-the-art technologies as prerequisites for fulfilling qualitative, quantitative and price parameters of the demand for agricultural products on both short-term and long-term horizons.*

A current alternative perceived as a suitable solution (in a clear and economically elaborated concept) is the *association of farmers into various forms of sales cooperatives* that strengthen their bargaining position with processing companies and companies in the food and trade industries on commodity markets.

*The market structure of companies* engaged in agribusiness enables market power to be used in various forms in demand-supply relationships during price formation in related markets; it also influences the imperfect transfer of price changes / price shocks in a sequence of connected markets of appropriate commodity verticals. *The market power of crucial entities* in sequence within agribusiness enables the increase (to accelerate the decrease) in the market price of agricultural products to be limited and thereby achieve a certain share of agricultural enterprises in the final price of products, despite rather strong regulations and the application of systems and tools of direct support to prices of agricultural products in agrarian policies of crucial world competitors.

As *demand becomes* the crucial relationship influencing conditions in a range of connected agrarian markets, the *influence of the market structure* of agribusiness rises. During permanently excessive supply, which is typical of the majority of agricultural products in Europe, the market structure increases the risk and enables the market power of customers to be misused. At the same time, however, it often decelerates the coordination processes of activities related to the reduction of transaction costs in the commodity chain and becomes another factor in the imperfect transfer of demand in the sequence of agrarian markets from consumers to agricultural producers. Under current conditions, the required strengthening of position and competitiveness on the world agrarian and foodstuff market concerns entire foodstuff production chains (all segments of the appropriate commodity vertical). The requirement arises from the need for quick response and adaptation to changing external and

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1 Common agricultural and structural policy of the EU follows this aim, among other things, especially with respect to the member countries with a low share of production-oriented and market-oriented agricultural enterprises.
internal conditions, including rising demands for the coordination of activities within commodity verticals.

If the competitiveness of a certain economic system is generally understood as its ability to achieve results corresponding to the aims of the system and dynamics thereof in a competitive environment, then under current conditions the crucial criterion for production in an agricultural enterprise is competitiveness from the perspective of the acceptability of an offered product by the market, i.e., in the broader context of agribusiness, the criteria of the participation of an agricultural enterprise in the system of foodstuff production.

The examination of the economic efficiency of foodstuff economy within agribusiness as a whole will be ever more significantly based on the dynamic concept of competitive advantages in the entire complex. The advantages are conditioned and should be measured not only by the result of a relatively independent entity on a specific agrarian market that corresponds to the particular stage of the increase in value of the original raw product within commodity foodstuff chains, but especially by the result of entire commodity chains that include not only activities, but also conditions and mutual relationships of entities participating in the development, production, processing and distribution of foodstuffs within the entire process of production, processing and sales of final products. A similar approach should be exerted to the identification and assessment of manifestations of market power within the entire vertical.

4 CONCLUSION

It is obvious that despite regulatory interventions and different levels of legislative environment, in general, the development in agribusiness will further increase the dependency of agricultural enterprises on related segments of foodstuff chains, including the transfer of risks and the enforcement of market power in a broad range of mutually connected markets.

We can also expect the expansion of relevant markets accompanied by the overcoming of regional limits in interactions between primary production, purchase and first-level processing of agricultural products. Although this development in Europe is mostly said to be the result of the concentration of trade companies, consolidation processes are currently in progress, especially in various fields of the foodstuff industry. In order to strengthen their influence and preserve their competitive advantages on markets of food products, promising companies in this segment of the vertical seek and prefer suppliers of agricultural products that offer permanent supplies of relatively big batches of agricultural products with even quality and at reasonable prices.

To respond to these changes in agriculture means to adapt to the new environment, seek connections with these segments of commodity / foodstuff verticals and coordinate production specialization especially with respect to permanent sales of most commodities, which often exceed the existing boundaries of the particular region. The key to how to withstand the competition and the excess of supply on the European market of agricultural products during the continuing liberalization of the market is especially the decrease in unit costs of production, i.e. concentrated production enabling a positive response to price conditions and a guarantee of a decrease in transaction costs through participation in commodity chains.

The problem faced by the whole Europe and thus also by the Czech Republic, i.e. how to compete successfully on an increasingly globalised food market, can be resolved essentially in two ways.

It is either possible
(1) to preserve the historic production structure based above all on different qualities of natural conditions, especially agricultural land, using this fact to justify the uneven outcome of agricultural production in various regions and also the entitlement of various regions to additional financial means in the form of subsidies, thus enabling traditional agricultural production to continue for as long as possible and “protecting” traditional European producers against increasing competition of cheaper products and food from other parts of the world, or

(2) to look for a positive solution, often requiring significant structural changes in production orientation and other economic activities of individual companies in accordance with the principles of a knowledge-based economy capable not only of showing the deeper connections and behavioural principles of the current food markets, but also motivating individual subjects to adopt the necessary restructuring measures reacting actively to the development and conditions of demand on the relevant markets.

Although at the current stage of development, agricultural enterprises are significantly limited by regulatory mechanisms of the common agricultural policy of the EU, which is undergoing gradual reformation, they should not be merely passive recipients of incoming changes. In relation to a certain level of decentralization in the selection and allocation of economic tools within the concept of direct payments and individual axes of the Structural Development Fund, producers (and processing companies) should be supported by such tools that enable them to utilize unique knowledge and available opportunities for the creation of long-term competitive advantages anticipating changes in the business environment.

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