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STRUCTURAL GAP IN THE LINKS AMONG AGRIBUSINESS ENTERPRISES

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K e y w o r d s: economic links, agribusiness, structural gap.

A b s t r a c t

Partnership cooperation of food economy sector (farms, processing enterprises, distribution) can form an important element of strategic activities facilitating development of competitive advantage also in the context of participation of Polish agribusiness in the international food trade. Currently activities focused on cooperation within food products distribution channels is missing. The weak market position of farms is the basic barrier to changes in economic relations between agribusiness entities. Agricultural producers show low activity in the area of horizontal integration. By the end of June 2007 46 groups of pigs producers and 5 groups of cattle producers were registered in Poland. In total they integrated 2,700 farms. The farms covered by the study indicated the clear domination of food processing enterprises in regulation of the principles of cooperation. Farmers most often indicated pricing, quality standardization, classification of products and system of financial settlements as the elements with the highest domination of meat industry. Only few farms (12.0% of pigs producers and 8.3% of cattle producers covered) defined cooperation with processing enterprises as based on full partnership.

LUKA STRUKTURALNA W POWIĄZANIACH MIĘDZY PRZEDSIĘBIORSTWAMI AGROBIZNESU

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S ł o w a k l u c z o w e: powiązania gospodarcze, agrobiznes, luka strukturalna.

A b s t r a k t

Partnerska współpraca przedsiębiorstw gospodarki żywnościowej (gospodarstw rolniczych, przedsiębiorstw przetwórczych, dystrybucji) może stanowić istotny element działań strategicznych ułatwiających budowanie przewagi konkurencyjnej również w kontekście udziału polskiego agrobiznesu w międzynarodowym handlu żywnością. Aktualnie brakuje działań ukierunkowanych na współpracę w ramach kanałów dystrybucji produktów żywnościowych. Podstawową barierą zmian relacji gospodarczych między podmiotami agrobiznesu pozostaje słaba pozycja rynkowa gospodarstw rolniczych. Producenci rolni wykazują małą aktywność w zakresie integracji poziomej. Do końca czerwca 2007 r. w Polsce zarejestrowano 46 grup producentów trzody chlewnej i 5 grup producentów bydła. Łącznie integrowały one 2,7 tys. gospodarstw rolniczych. Badane gospodarstwa rolnicze wskazywały na wyraźną dominację przedsiębiorstw przetwórstwa spożywczego w zakresie regulowania zasad współpracy. Jako elementy najbardziej zdominowane przez przemysł mięsny rolnicy wskazywali najczęściej: kształtowanie cen, normowanie jakości, klasyfikację produktów, systemy rozliczeń finansowych. Nieliczne gospodarstwa (12,0% badanych producentów trzody chlewnej i 8,3% producentów bydła) określiły współpracę z przedsiębiorstwami przetwórczymi jako w pełni partnerską.

Introduction

Competition in global economy can increasingly rarely be based on the strength of an individual business entity; it frequently requires considering the possibilities of building wider economic structures. Transformations in the agricultural and food market determine intensification of strategic adjustments also in agribusiness enterprises, particularly because many entities in that sector are entities with a relatively small scale of operation.

Development of food economy is possible if all its segments participate simultaneously in that process. The institutional relations continue to be very important. Appropriateness of those relations forms the basic condition for stimulating the development of individual participants in agribusiness activities (KUJACZYŃSKI 2007). The fear concerning the forms of regulation of operation of business entities remains a threat to the efficient system of links in food economy. That fear applies in particular to efficiency and durability of management and administrative forms of control within the frameworks of the economic links established. From the focus on the direct client the activities can shift towards the concentration on the system of mutual dependences within the networks of links (BRYŁA 2007).

Durable mechanisms of reaction to market changes remain very important. Such a mechanism can be efficient if all the participants of the integration assimilate equally quickly the knowledge needed to maintain high efficiency of the system and quickly pass the information between individual links in the chain. Skilful sharing of knowledge within the information flow remains very important. All those elements lead to better coordination of activities combined into such a chain of agribusiness entities (BRYŁA 2007, KULAWIK 1996, MAŁYSZ 1998, MILEWSKI 2003).

The concept of supply chains can be classified as one of the more important management systems in agribusiness. The chains can have the integrated and non-integrated form. The basic advantage of the integrated chains is the lower level of transaction costs and higher functional synergy. The so-called “self--learning supply chains” are pointed at as a form or organizational development; their characteristics include, inter alia, the ability to notice market changes and fast adaptation to new conditions.

The combat of individual enterprises for market share can be transformed into combat of entire supply chains for consumer spendings on food. Engagement in that concept has specific consequences for, e.g. investment processes in individual enterprises. Maybe the border between the market of agricultural raw materials and, e.g. the market of short-term contracts will be destabilized slightly. Undoubtedly, the price risk as well as issues of quality and volume of sales become more stabile while a financial risk develops which not always can be low in case of participation in a strategy set in that way. The limitations concerning the free choice of the supplier – in the situation when some of them are participants in activities of that type – will be another important binder in the design of agribusiness chain. The increasing level of mutual dependence can lead to a more just distribution of profits from sales of food (BRYŁA 2007).

Integration processes also possess a macroeconomic dimension – they create better exports opportunities through better quality of food. In the nearest future implementation of a strategy of that type will, nevertheless, be difficult, particularly for farms, mainly because of the required social and financial potential necessary for organization and coordination of complex integration activities.

The goal of this study was identification of the most important conditions for creating integrated associations of business entities operating in agribusiness and the prospective determination of potential for implementation of those processes resulting from the current structure of agriculture and food economy. The paper focuses on the example of production of live pigs and cattle and red meat processing.

Methodology of study

Selected factors determining strategic adjustment processes in agribusiness enterprises to the increasing importance of economic links in the process of competition were the subject of the study. In Poland, the current status of agribusiness structure was shaped by long-term economic, political and social processes. During the recent years transformations in agriculture and food economy have been intensified mainly as a consequence of the influence of European Union common agricultural policy. The market of some agricultural raw materials and food products in Poland is characterized by a significant number of business entities and periodic overproduction coupled with the increasing liberalization of the trade principles in global scale. Entities of food sector (particularly farms), focusing their attention on modern mechanisms of competing must at the same time consider many administrative limitations concerning the size and quality of production, environment protection, etc.

The paper used, among others, the statistical materials of the Main Statistical Office, Institute of Agriculture and Food Economy Economics, Agriculture Restructuring and Modernization Agency and own studies. The analysis was focused on the subject potential of agribusiness (based on the example of red meat production and processing). That example was chosen because f a significant advancement of some integration processes (as compared to other sectors).

Own studies were conducted on selected for the purpose group of 60 high market farms situated within the area of Warmia and Mazury. The farms differed in area from 30 ha to over 500 ha (43.5% were farms of up to 100 ha, 33.9% farms from 100 to 500 ha and 22.6% farms exceeding 500 ha). The questionnaire-based study was carried out on entities with domination of animal production (pigs and cattle) in the structure of market production. The subject of the study was the opinion of agricultural producers on the current relations between the raw materials sphere and food processing.

Structure of agribusiness based on the example of meat production

The structure of food economy (agribusiness) consists of three basic links – supplies for agriculture and food industry, agriculture and food processing (DAVIS, GOLDBERG 1957). Within those links business entities operate which differ significantly in their potential and organization (farms, processing plants, trade entities and other). Important functional interrelations exist between individual links. Agriculture – the raw material segment, is characterized by a large number of business entities of, in most cases, small scale of operations characterized by low flexibility as concerns alternative use of their human potential and assets. Many small and medium farms are determined to keep to agricultural activity mainly because of absence of possibilities for generating income from alternative (non-agricultural) sources.

Animal production, which is a high added value potential activity depends to a significant extent on the area of agricultural land available. That dependence is typical particularly in case of cattle rearing where high demand for farm fodders exists, but it is also confirmed in case of production of pigs where large scale of live animals production is carried out in farms possessing a large area of agricultural land (Tab. 1).

Table 1

Individual farms according to the heads of pigs produced and groups of agricultural land area

Area groups (ha)	Farms possessing a number of pigs									
	1	2	3-4	5-9	10-19	20-49	50-99	100-199	200-499	over 500
	as percentage according to area groups									
Up to 1	10.7	6.3	5.4	3.2	0.8	0.7	0.6	0.0	0.1	0.3
1-5	57.1	52.9	44.7	25.2	20.1	9.6	1.2	0.4	0.3	0.8
5-10	16.0	24.5	28.0	38.4	38.5	28.7	15.7	4.0	2.3	1.3
10-20	12.2	14.0	16.9	26.6	31.6	47.0	51.2	41.1	19.0	10.1
20-50	3.4	2.0	4.6	6.0	8.5	12.6	28.0	44.7	51.9	30.8
Over 50	0.6	0.3	0.4	0.6	0.5	1.4	3.3	9.8	26.4	56.7

Source: *Rocznik...* 2005.

Linking high market production of pigs with farms of larger area limits the necessity of using external supplies of fodders, which has an important influence on production costs (fodders represent ca. 50-70% of total costs). Over 78.0% of herds consisting of from 200 to 500 heads is maintained in farms exceeding 20 ha in area while 56.7% of herds exceeding 500 heads of pigs is owned by farmers possessing more than 50 ha of land. From the perspective of farmer farms the rank of structural links with supply enterprises is much lower as a consequence.

For market reasons links with processing industry enterprises are of much more importance for farms. Food industry in Poland is at the stage of adjustment to operation within formal conditions resulting from European Union regulations and additionally it continually combats a significant level of competition. The structure of food industry in Poland is also dominated

Table 2

Structure of red meat slaughterhouses and processing plants in Poland

Plant type	Slaughterhouses and slaughter departments				Processing plants and department			
	number of plants	%	slaughter (K tons)	%	number of plants	%	slaughter (K tons)	%
Industrial large	18	0.7	350	17.3	27	1.0	350	29.3
Medium	213	7.6	410	20.2	320	12.1	370	31.0
Small	400	14.3	220	10.8	525	19.8	225	18.8
Local	2165	77.4	1050	51.7	1777	67.1	250	20.9
Total	2796	100.0	2030	100.0	2649	100.0	1195	100.0

Source: Own work based on Kozera, Gołaś (2005).

(similar to agriculture) by enterprises of relatively small scale of operations. Particular difficulties resulting from that situation are experienced in meat enterprises (Tab. 2).

In general, the structure of slaughterhouses and red meat processing plants in Poland indicates a very important role of small local plants that slaughter a half of the animals. In meat processing a slightly more important role is played by medium and large enterprises. In case of a small scale and local character of operations it is difficult for such enterprises to carry out all the functions of the strategic integrator of agribusiness in a given region.

According to the IERiGŻ (*Stan*... 2006) a clear change in sales channels applies to only certain products of agriculture. In case of animal products (Tab. 3) it can be concluded that during the recent years the structure of pigs sales channels have been changing while changes concerning sales of cattle have had a limited scope. Farmers resign direct sales of pigs and increasingly frequently they sell to medium and large purchasing entities (almost 60.0% of market production).

Table 3

Structure of pigs and cattle sales channels (in % of market production)

Item	Pigs		Cattle	
	2003	2006	2003	2006
Direct sales	18	11	10	10
Purchases by small companies	33	30	42	42
Purchases by large and medium entities covered by operational reporting	49	59	48	48

Source: Own work based on *Stan*... 2006.

Considering the changes in demand for food products it can be assumed that diversification of the offer of food products will be favorable for integration; strengthening the integration is the basic condition for better quality and fast flow of raw material. With the increasing capital strength of potential agribusiness channels integrators capital integration downstream, e.g. own distribution in case of processing, own processing and distribution in case of strong groups of agricultural producers, remains an open issue. Implementation of that type of activities, however, is still limited.

Structural links in agribusiness and limitations to them

Structural links get increasing economic importance because of the common influence on, e.g. product quality, and as a consequence satisfaction of food products consumers. Functional interdependencies within agribusiness include, among others, the following influences:

– farms determine the quality of raw materials that are processed by, e.g. meat industry. The processing industry can stimulate the raw material quality level by supplying the farms with knowledge, genetic material, fodders, veterinary services, etc.;
– farms represent the link preceding the food industry in sanitary-hygienic correctness. The food industry is anxious to maintain high standards in that area;
– possibilities of raw materials sales outside farms depend on the market effectiveness of processing enterprises. Market success of processing enterprises depends on the ability to retain the markets by securing systematic supplies dependent on rhythmical deliveries of raw materials;
– perception of food producers is increasingly frequently done in the categories of the region from which raw materials are obtained and the production system at supplying farms (e.g. ecological);
– during the times of globalization and competition in international market the needs develop for, e.g. joint presentation at food exhibitions (MAŁYSZ 1998, MILEWSKI 2003).

In practice, functioning of that type of links is not commonly considered in practical activities of enterprises. There are many barriers that do not allow rational building of the competitive potential on the basis of full use of functional interdependencies. The confirmation of that unfavorable phenomenon is, e.g. the limited number of horizontal links between farms (producer groups) and still unexploited potential of vertical integration taking into account common interests of farms and food processing enterprises.

In case of a small scale of operations, effective integration of farms into producer groups jointly implementing the production and marketing processes represents one of the methods for improvement of the competitive position. Rationally organized and efficiently managed producer groups that can use the financial support of public funds represent one of the fundamental plateaus for improvement of agribusiness structure, particularly in the operationally difficult markets of agricultural products (e.g. pigs).

Economic benefits of membership in a producers group can be achieved by farms independent of their scale of operation. Even farms with effective scale of operations and high levels of sales can in that way expand the benefits as compared to the situation of operating outside the group. Smaller farms gain the opportunity of benefiting from bonuses and rebates not usually available to them even to a minimum extent as small sellers of products and buyers of the means of productions. Some studies prove that the economic effects in the categories of value increase with the increase in the scale of sales while smaller farms obtain much higher benefits per unit of product sold (FLORCZYK, NASALSKI 2003). In spite of numerous programs supporting organization and financing of producers groups that are available there are few such groups operating in Poland. Farms producing pigs associate in groups much more frequently than the farms producing cattle (Fig. 1).

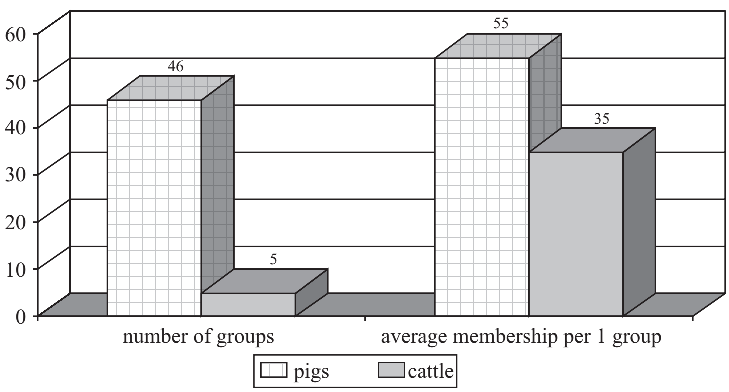

Fig. 1. Number of registered groups and membership in pigs and cattle producers; groups in Poland (June 2007)
Source: Own work based on MIŁOSŁAWSKA-KOZAK (2007).

The low level of horizontal integration dynamics has not been increased significantly by the government program of support to agricultural producers groups. The system for financing of establishment and operation of agricultural producers groups set up to adjust the production to market requirement, joint marketing of goods for trade by group members (including preparation for sales and delivery to wholesale buyers as well as establishing common principles of information on production with particular focus on the yield levels and availability of products) has been implemented within the frameworks of the Rural Development Program for 2007-2013 (it was similar in case of the RDP 2004-2006). The support offered is accrued on the basis of net year value of revenues from sales of products or groups of products that were produced on farms of group members and it amounts:
– 5,0%, 5,0%, 4,0%, 3,0% and 2,0% of the value of production sold representing the PLN equivalent of up to € 1 million during the first, second, third, fourth and fifth year of operation respectively, or

– 2,5%, 2,5%, 2,0%, 1,5% and 1,5% of the value of production sold representing the PLN equivalent of above € 1 million during the first, second, third, fourth and fifth year of operation respectively,
– the amount of support for a given year cannot exceed: during the first and second year € 100,000, during the third year € 80,000, during the fourth year € 60,000 and during the fifth year € 50,000 (*Grupy*... 2007).

There are still numerous barriers to cooperation between farms and the processing industry. The most important among them include the evident domination of food industry enterprises as concerns regulation of cooperation. Minor influence of farms on important parameters of cooperation limits the propensity to expand it. As concerns the assessment of cooperation between farms and meet enterprises, the owners of pig farms covered indicated that within the frameworks of that cooperation regulations concerning product price, product classification and financial settlements methods were clearly dominated by the buyers of livestock (Fig. 2).

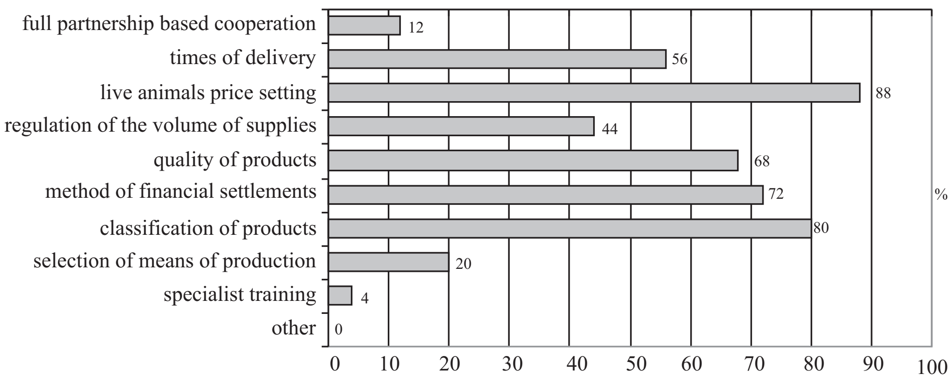

Fig. 2. Areas of cooperation of farms (pig) with meat industry enterprises according to the opinion of farmers excessively dominated by the processing industry (% of answers)
Source: Own studies.

In the study on cooperation with purchasing entities owners of cattle farms covered indicated limited possibilities of farmers to influence the price and the necessity of strict observation of the defined product quality. The issues of the "imposed" method of financial settlements for sales transactions and classification of products were also indicated (Fig. 3).

The abovementioned factors limit the determination for establishing the organizational links between agribusiness entities significantly. To a certain extent this also points out at the destructive domination of processing enterprises in mutual production-market relations with farms. Only 12.0% of the

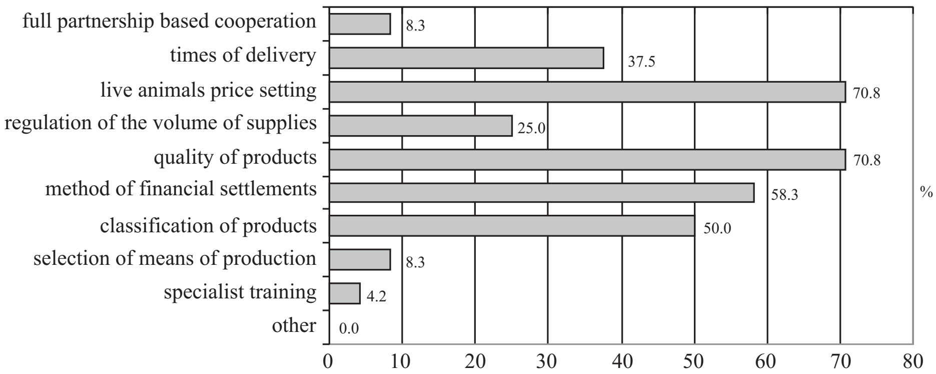

Fig. 3. Areas of cooperation of farms (cattle) with meat industry enterprises according to the opinion of farmers excessively dominated by the processing industry (% of answers)
Source: Own studies.

pig farms owners and 8.3% of cattle farm owners assessed the cooperation with meat industry as fully partnership based.

Service institutions dealing with commercial transaction services (transport companies, banks, insurance companies, entities conducting marketing studies, consulting companies, etc.) stabilizing the relations between the raw materials sector and processing sector of agribusiness should take more active part in marketing chains. Participation of those entities can streamline organization of those links, form their profile and secure rational system of financing and protection against various types of risk factors.

Conclusion

Integration processes do not represent currently an important element in the development strategies of the majority of agribusiness companies independent of their position in the food chain. That situation is the consequence of, among others, limited possibilities of influence of entities possessing a relatively small share in the market. The farms covered by the study, commenting on the cooperation with food processors indicated price determination, quality standardization, products classification and financial settlements systems as the elements characterized by the highest domination of food industry enterprises. With the existing structural gap in agribusiness the possibilities of quality control and easy identification of the food source of origin are limited while it is much more difficult, particularly in case of small farms, to coordinate the volume of production and rationalize the market risk. The plateau of partnership cooperation in agribusiness should be expanded systematically and faster development of integration between farms will be one of the conditions for effectiveness of that process.

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