THE IMPACT OF THE HORIZONTAL INTEGRATION ON THE FINANCIAL PROCESSES OF THE VERTICAL COORDINATION

UTJECAJ HORIZONTALNE INTEGRACIJE NA FINANCIJSKE PROCESE VERTIKALNE KOORDINACIJE

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Abstract: *In our paper we give a short theoretical review of the typical features, objectives and reasons of the vertical integration. Moreover, we also examine the possibilities for such a horizontal form of cooperation, which was made possible by an act taking effect in 2004 and which is able to concentrate and, from many aspects, integrate the producers, so making them a suitable negotiating partner for the economic power of the processor (market integrator). It is manifested in the fact that this way even the producers themselves will be able to negotiate considerable reductions from their purchases, sales and inclusions of their external assets.*

***Key words**: vertical coordination, producer organisations*

Sažetak:*Ovaj rad daje kratki teorijski prikaz tipičnih karakteristika, ciljeva i razloga za vertikalnu integraciju. Nadalje također se razmatraju mogućnosti takvih oblika horizontalne kooperacije koje je omogućio zakon koji je stupio na snagu 2004. godine. On je omogućio koncentraciju i integraciju proizvođača u brojnim aspektima čineći ih tako korisnim partnerima u pregovorima. Na taj način će i sami proizvođači moći pregovarati o povlasticama u nabavama, prodaji i uključivanju njihove vanjske imovine.*

***Ključne riječi:** vertikalna koordinacija, organizacije proizvođača.*

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1. Introduction

The financial position of the producers in agriculture is mostly in danger. This fact is coming from the risk of production, the changeable weather conditions, that have a major effect on the performance especially in plant production. The other speciality is the seasonable production that causes differences in the cash-flow, namely the expenditures and the revenues occur apart each other. This two problems lead to the problem that the producers are in the need to find affordable possibilities to finance their production, to reduce the costs of the risk. The solution could be a producer organization, or market integrator

2. Vertical coordination – vertical integration

Vertical coordination means harmonizing the operation and activities of the organisations depending on one another in the production chain starting from the production of the basic material to the production and sales of the final product. It also includes the expectations regarding the quality and quantity of the materials used as well as other elements of production and organisation. Its organising principle is the finished product.

The difference between three basic types of vertical coordination:

- *Open production,* in which primarily it is the market prices that direct transactions.
- *Contractual production,* where law enforces the producer to sell and the customer to buy.
- *Vertical integration*, which integrates the players of the chain in one organisational unit. [1]

The levels of vertical coordination can be distinguished on the basis of the strength of the connectedness. Vertical coordination is the strongest in vertical integration forms while the other end of the scale is comprised by market information systems. [2]
Among them we can find community marketing, long-term contracts and strategic alliances in an increasing order regarding the strength of the coordination. Vertical integration is such an extreme type of coordination in which the different steps are concentrated in an economic organisation.

Both works quoted approach an internal (organisational) coordination from an external (market) one, i.e. the internal administrative means of the organisation take the place of market factors in the coordination of the vertical organisations when approaching the vertical integration.

According to another interpretation integration is 'such a cooperation based on the mutual economic interests of the parties lasting minimum for a year but usually regulated by medium-or long-term contracts in which one of the contracting parties (the integrator) provides another contractual party (the integrated one) with market and/or production security as well as helps the private producer or the economic organisation carrying out agricultural activity by means of different services or financing'.[3]

The main point of the vertical integration is striving for harmonious operation among the participants of the product chain, which is one of the most important conditions of adaptation to the market resulting in the formation of a dependant relationship between the successive levels built on one another, which can also bring several advantages for the players of the vertical organisations.[4]

One of the essential problems of agricultural production regarding financing is the different timing of expenditures and returns. Two groups of current assets can be discerned regarding returns:

- *Closed cycle* is the production chain in which the costs incurred during production accumulate and it is only at the end of the production process when we can count with some return (a typical example is the branches of plant production).
- *Open cycle* is such a production process in which the operating costs incurred will return almost simultaneously with their use (usually in the case of the branches of animal husbandry).

In case of the open cycle the assets by means of which current assets can be financed must be raised. There are two groups regarding the sources of financing. One of them means own capital and other internal sources while the other one comprises foreign capital, which can derive from capital and money markets, integration connections, funds as well as other resources.

Several interpretations and models exist in connection with the research on vertical integration, which explain the reasons for and the consequences of integration. One of the most decisive reasons is decreasing costs or reducing a kind of externality due to which a company opts for vertical integration. A company is said to be vertically integrated if it can produce much cheaper on the necessary production levels this way than it could without integration. Moreover, the costs incurred by integration are another factor to be considered. A company integrates if the advantages deriving from it exceed the costs. It is necessary to identify all the factors that can mean an advantage or a disadvantage in the case of integration. (Table 1)

Advantages	Disadvantages
▪ market stability (stable connections, secured supply and/or demand), ▪ price stability (contractual price), ▪ possibilities for financing (financing current assets and invested assets), ▪ cost reduction (transaction costs, economies of scale, harmonising operations, price reductions, reducing the costs of external sources etc.), ▪ possibilities for technological development (e.g. a tighter production technology)	▪ the costs of mobilisation, high ratio of fixed assets, ▪ loss of flexibility, slower reaction, ▪ higher costs of production factors and product sales * ▪ higher barriers of secession, ▪ higher administrative and managerial costs, managerial problems, ▪ rising legal costs (intent of amalgamation)*

Table 1: The advantages and disadvantages of integration [5][6]

The reasons for integration are worth to be approached from the following main points of view [5]:

- reducing transaction costs
- securing supply (securing input supply)
- abolishing externalities (internalisation)
- avoiding governmental interference (price control, taxes, regulations)
- increasing monopolistic profit (by integrating the branches of production or by means of price discrimination)
- ceasing the market power domination

The theory of transaction costs analyses the reasons for integration in which the main drive is the criterion of efficiency, i.e. the volume of costs for production and transaction required by the alternative institutional forms dealing with and organising the transactions. This transaction cost can be influenced by three basic forms of behaviour drafted about the transaction partners [6]:

1. *bounded rationality* (restricted amount of information and limited capability of processing information)
2. *opportunistic behaviour*, (self interests of the transaction partners)
3. *risk neutrality* (it is in opposition with economic rationality, the founder of this theory employs it for the sake of simplicity).

The volume of the costs of carrying out and organising transactions can be influenced by three contractual features:

- *transaction-specific investments* (how special factors are necessary). They can reduce the incurred production costs as an advantage of specialisation but it can also lead to dependency, which entails the increase in transaction costs.

- *uncertainty coupling the transaction* (it can emerge from the conditions and future state of the transaction or the opportunistic behaviour of the partner). The higher degree of uncertainty can lead to the rise of transaction costs.
- *the frequency of the transaction* (the higher frequency can reduce the costs of transaction).

The coordinating mechanisms available to carry out transactions differ regarding the intensity of the drive, administrative control, contractual relations as well as the type and strength of adaptability. The three coordinating mechanisms are the market, hierarchy (the company) and the long-term contract (hybrid types of organisations). Players can enter into vertical integration to reduce their transaction costs. If the transaction costs are high, the intention of opportunistic behaviour is stronger although to exclude it, quasi-integration is enough, in which the company owns the specialised physical means not the whole supplying company. [5]

Another explanation of institutional economics for the integration is the theory of property rights, which defines property rights, i.e. institutionalised forms of behaviour to make use of resources, the compliance to which is generally expected and their violation can be punished. [7]

In compliance with this, vertical integration is interpreted as owning means and not as a contract securing tight relationship. As several similarities can be found among the certain approaches, basically the main factors deriving from the profit-oriented behaviour of the players are regarded to be influential and the advantages taken of them are the main motivators. [8]

3. Producer organisations (POs) – The possibilities of a horizontal organisational form – scientific investigation

In Hungary a law entered into force in 2004, which made it possible for the POs to be formed. It belongs to the organisational forms supported by the European Union besides the producing-selling and purchasing-selling cooperatives.

Producer organisations are such cooperations of producers organised by identical products or product lines in which they cooperate voluntarily to perform an activity suiting their profile of independently performed agricultural, forestry or fishing basic activities to strengthen their market position especially to assist the production processes of producing plants or animal products, their procurement, handling for processing, storage, preparation to be transformed into a marketable product as well as their common sales by complying with the rules and regulations concerned.

The compulsory tasks of production organisations designated by law:

a) organising production and harmonising it with supply especially with regards to quality and quantity;

b) ensuring the technical background to store the products of the members, to prepare them for processing and to sell them as finished goods;

c) integrating the groups of producers and the common sales of the product quantity, which is enough to favourably shape the price and sales conditions of the given product in the market;

d) performing modern production, sales, organisational and counselling tasks that can reduce costs and help strengthen market positions.

An important criterion of the successful operation of the producer organisations is reaching the suitable size as well as improving the competitiveness of the agricultural players. The conditions outlined further in the regulation are to secure this:

- the organisation has to comprise at least fifteen producing members
- the annual revenue deriving from the sales of the produced or processed finished products has to reach at least three hundred million Hungarian forint.
- the revenue deriving from the natural members of the producer organisations from the sales of products subject to the recognition of the state cannot be lower than 3-10 per cent of the sales revenue depending on the product itself.

A further incentive of growing size is the fact that the recognised producer organisation is eligible for a non-recurrent, non-refundable operational support of a degressively declining amount subject to the revenue (75% EU source, 25% state subsidy) for a period of five years. (www.fvm.hu)

The declining extent of the support has a consequence, namely, that the producer organisation should require the fixed members' contribution necessary for continuing its activities in line with the excluded amount of support.

The law also orders the producer organisation to be centred among only one product and its revenue deriving from supplementary activities should not exceed 30% of its total revenue.

The liabilities of the members of the producer organisations:

e) entering into contract with the producer organisation for sales;

f) complying with the rules of the organisation on production and environmental protection;

g) paying a contribution to the operating costs to finance it based on the value of the product distributed through the producer organisation;

h) supplying the organisation with production data as well as those concerning the use of products for own purposes (such as production area, the quantity and yield of the harvested, sold product etc.);

i) membership in only one production organisation to sell a single given product (product line);

j) carrying out 100% of the production of their goods recognised by the state through the production organisation with certain exceptions;

k) undertaking membership for at least three years in the producer organisation after the accession.

l)

The liabilities of the members designated above obviously guarantee the operational success of the POs. It ensures products for sale for the organisation in the medium term, standardises the rules of production and environmental protection observed by the producers to a certain level and also ensures the homogenous supply of the product (product line). It must be highlighted that it compels the members to membership lasting for three years, which helps planning and building long-lasting partnerships. A further advantage of the latter one can be other possibilities for cooperation between the members (e.g. if there is a seed breeder among the members).

The producer organisation is such cooperation where legal regulation orders the requirement of common sales for the members solely. It does not require the members to carry out procurement together. If the producer organisation makes a tender for the suppliers regarding the procurement of different input materials, it can also make use of considerable reductions compared to individual procurement (its extent is, of course, dependent on e.g. the pricing policy of the supplier, its market connections, so on business-partner specific factors on the one hand, and on the typical features of the deal such as deadlines, terms of delivery etc. on the other hand). One of the most important parts of this question besides the size is solvency, the ability to pay as the reductions available from the supplier depend on the period within which the customer is able to settle payment.

Another function not mandatory by law is in close connection with this, as the producer organisation can undertake the responsibility of financing the members –as lack of sources is typical of agricultural production. This way the producer organisation can be able to finance the input requirements of the producers, as well, like the processor (integrator) by means of employing different pre-financing constructions and ensuring the suitable background. As in a general case the producer organisation has no other activities (or assets) than sales, its most important guarantee is making use of the services of institutions and insurance companies offering different joint and several guarantee who can be contacted immediately after paying in a certain sum of money. It is further enhanced by the 'creditability' of the producer organisation, its operation serving purposes designated by law, the expertise and professional knowledge of the management, which are also taken into account by the banks when assessing the creditworthiness.

Making use of these two functions simply cannot be expected from the member but they will be able to produce under a lot more favourable conditions- i.e. cheaper than by means of individual procurement or financing source.

As a result of examining these conditions we can state that the producer organisation is able to fulfil the role of an integrator which does not require the cooperation of another integrating (usually processing or merchandising) company operating on a certain level of the vertical organisation of the given product with solid capital present in the market. It means that none of the members will be exposed to an organisation representing a significant market power as the integrating organisation established by them will coordinate them.

	Producer Organization	Market Integrator
Inputs based on commodity credit	Sowing seed, fertilizer, pesticides	Sowing seed, fertilizer, pesticides
Accessible discount on input prices	15-30 % of the product price	5-10 % of the product price
The volume of the product as an exchange for the input	Produced volume	3 tons/hectare
The value of the input that can be given per hectare	80.000 Forint/hectare	80.000 Forint/hectare
Level of the interest rate	1 monthly BUBOR +1,15%/year+ 0,8%/years	3 monthly BUBOR +4,75%/year
Contribution to the functional costs	1 % product value	1,5 % of the product value
Application of the guarantees	▪ selling contract ▪ bill of exchange ▪ plant insurance ▪ right of pledge on the produced product	▪ option agreement ▪ bill of exchange ▪ plant insurance ▪ right of pledge on the produced product
The maturity of the commodity credit	August 31, every year.	August 10, every year.

Table 2: The conditions of the Producer Organizations and a Market Integrator

The difference can be expressed numerically if we compare the financing conditions offered by a producer organisation coordinating crop producers and a market integrator also financing crop producers (Table 2).

The producer organisation also needs attention regarding the fact that it defines a lower fee for cooperation, i.e. 1% of the transitional value. However, this fee, supplemented by the operational support, can only cover the financing of its activities so practically it is run as a non-profit organisation. Of course, the extent of this contribution must be raised by the producer organisation in the future, which derives from the degressive nature of the extent of the support. Keeping the costs of integration at such a minimum level and operating a similar organisation to this can meet a serious resistance from the part of the integrators on market foundations.

4. Conclusions

If recognised, the producer organisation provides a great chance for the agricultural producers to protect themselves from the return-appropriating behaviour of the integrators with market dominance- thus relatively the great bulk of the profit gained by means of the economies of scale serves directly the interests of the producers.

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