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Institutional characteristics of the Hungarian grain sector – research methodology

Abstract. The article presents the institutions of the grain product path (transaction costs, applied economics of contracts). The article presents the method of research. Due to limited space, the concrete facts, figures, and results are not presented.

The aim of this paper is to identify the factors which influence the development or lack of contractual relationships, as well as how vertical coordination could contribute to the improvment and stabilization of terms between the participants involved in the sector. The conditions under which the contracts are made, as well as the differences that exist in practice and the reasons why the different controlling structures are applied are also presented.

A questionnaire was used to collect details about each participant of the grain sector. In this article, the structure of the questionnaire, the main characteristics of the survey, as well as the collection of hypotheses of the expected results based on the analizations, are also introduced.

Keywords: grain sector, applied economics of contracts, transaction costs

Introduction

In the article, there was first outlined the characteristics of institutions in the grain sector and its problems, and then the methodology of empirical research is introduced referring to the institutions of the grain sector. Also, there is discussion about the aim of the questionnaire, its structure, then the introduction of variables applied in the survey, though it is not intended to be exhaustive. Finally, the hypotheses regarding the research results is stated.

Institutional characteristics of grain sector and its problems

The institutions basically can be divided into two parts, the so-called institutional environment (rules, principles, that control the attitude of participants) and the organizations (that make sure the frames of functioning in the market).

The grain sector includes the following institutions, as organizations. [Lehota, 2003]:

1. Spot Markets
2. Concentrated Markets
3. Hybrid Institutions
3.1. Contractual Systems
3.2. Institutions of storage, warehousing
3.3. Co-operatives, associations, and othe forms of cooperation

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In the grain sector the spot markets, the contractual relations and vertical integration based on joint property run parallel in determining the sector's characteristics.

In the input relations of cultivation of grain crops (seeds, plant-protecting materials, fertilizers, and machinery production) mainly the contractual relations are determinant.

In the case of material producers and the primarily processing industry (flour milling industry, forage industry) also the contractual relations determine the sector, but they are supplemented with spot market relations.

The primary and secondary (pasta companies, sweets industry, baking industry and starch production) relations between the processing companies, are based partly on a vertical integration based on common ownership, partly on contractual relations and partly on spot market relations. [Lehota, 2003].

Empiric research referring to the institutions of grain sector

Aim and structure of the questionnaire

The primary aim of the questionnaire is to study the connections between the participants of the grain product path – based on the theory of transaction costs, and on the applied economics of contracts; as well as the analysis of the main factors which determine the different controlling structures.

It is necessary to estimate which factors influence the development or lack of contractual relations, as well as how the tools of coordination could contribute better to the stabilization between the growers and the processors.

The main questions are the following: how, and under what conditions the contracts are made, what differences exist in contractual practice, what the driving forces are behind the different controlling structures.

Characteristics of the sample and introduction of willingness to answer

The survey was based on the registers and databases of the following organisations:
Millregister, public grower list, the leaders of county directorates of FM, the National Association of Graingrowers, the Hungarian Farmer's Ring and Farmer Associations, the National Association of Agricultural Growers, Hungarian Graingrowers, the Association of Forage Producers és Traders, National Association of Farmer's Ring in Hungary, the Association of Young Farmers in Hungary, the Council of Grain Products and Trade Organization and Council of Seed Products.

The questionnaire contained 4 blocks:
I. General questions
II. Questions referring to employees
III. Questions referring to contracts
IV. Closing questions

During the examination nine canals of marketing were differed: Opened (wholesale) markets, wholesale traders, marketing (sales) associations, grower and trader organizations, concentrated markets (stock exchange), engrossers, mills and processors, buyer associations and others. These canals can be ranked as different levels of controlling structures within the marketing system.

The data of the survey include nominal, ordinal and data measured on an intervallum scale. After receiving the questionnaires, the database was formed and cleared.

Due to the applied electronic questioning process, the received answers were automatically stored in a database. The different columns of the database were formed by the questions which were asked, their lines were formed by the given answers received in each questionnaire.

After receiving the questionnaires, the variables were coded according to the questions, then the database was checked by fixing and clearing. When coding, the content of the question was taken into comparison, and I tried to form codes that are simple, easy to recognize, and that can be understood by statistic program packs.

The questionnaires that markedly lacked data were deleted from the database. In some cases, the missing data could have been obviously supplied.

When the content was being checked, mainly the bad, bland answers were strained out. Bad answers come from misunderstanding the measures, in most of the cases these mistakes could be corrected. Controversial answers also came from the inconsistency of respondents, and had to be weighted at each questionnaire.

Introduction of the variables applied in the questionnaire

79 variables were applied in the questionnaire.
The questions were divided into four groups according to the following subjects:
- Basic characteristics of the examined enterprise,
- Characteristics of the applied contracts,
- Bargaining positions of participants in product path,
- Opportunity to obtain information.

The applied variables in the examination can also be grouped:
- Information costs,
- Negotiation costs,
- Checking costs,
- Physical tools specifications,
- Human resources specifications.

Introduction of hypotheses

The main theory that was expected from the questionnaire examination is the following: unsettled and improperly developed market institutions spoil the efficiency of the grain product path. It causes high transaction costs. Vertical coordination could improve and stabilize the relations of participants of the sector.

Four question collections of hypotheses were set up, within which were several subhypotheses. The characteristics of the theories (based on Fertő I., Juhász P., Kapás J., Kiss T., Szakál F., [at. all.]) are the following.

1. What factors influence the evolving or lack of contractual relations?

One of the main characteristics of contractual relations is fluctuation, due to the significant fluctuation of grain production and the different market expectations of growers and processors. This is typical of mainly the mill- and forage- industries, as well as between grain wholesale traders and national smaller sized grain traders. (Lehota, 2003)

An advantage of using contracts rather than open market sales is that a contract moderates the price, and in this way, the income risk as well (risk sharing approach). On the other hand, it reduces the costs of realization in the spot market (transaction costs approach). This latter makes us reach lower production costs, and also makes the coordination faster between the different levels of production, for example by adapting new technology, development of information flow, quality controlling, easier reach of loans, etc.

When the transaction costs (namely costs of market exchange) have an important role, the application of contracts will lead to the improvement of productivity and better quality of products.

2. What differences exist in contractual practice?

The bargaining position and the determination of contract is essential in the aspect of concrete price.

The problem of contractual realization is that it does not include contractual guarantees or assurance for the grower and the buyer, and the legal compulsion of contracts is missing. Arguments over quality and quantity completion are the most frequent, as well as the keeping of delivery and completion deadlines. Their reasons are the growing lack of capital, financial difficulties and the fluctuation of supply and demand. The obtainment of contracts' clauses by legal force: legal process, and the institution of chosen court [Lehota, 2003].

Regarding the duration of contracts, longer duration of contract means closer cooperation, call it (vertical) integration. Certain contracts oblige the growers to make such long-term investments, which make customer-specific production possible. In case, a contract means only a short-term buying-up obligation for the customer, it means the further risks (so-called barrier problems) for the grower, which may come from the cancellation of contract, or the buyer's fault, etc. There might be such cases, that give the customer a dominance in the market.

3. How could the vertical coordination contribute better to improvement and stabilization of the relationships between the participants of the sector?

The size of an organisation influences the bargaining position in a positive way. Associations have an important role in the vertical integration, by improving, keeping and strengthening the technological and market efficiency of members, as well as their income positions, and independence – compared to the alternative integration mechanisms [Szabó, 2002].

Table 1. Summary of the Hypotheses

1. Hypothesis group: What factors influence the evolving or lack of contractual relations?	2. Hypothesis group: What conditions are contracts made on, what differences exist in contractual practice?	3. Hypothesis group: How could the vertical coordination contribute better to improvement and stabilization of the relationships between the participants of the sector?	4. Hypothesis group: What are the driving forces behind the choice of different controlling structures?
1.a. hypothesis: Written contracts are done only by certain groups of the sector, other groups do not have written contracts at all or only in a small measure	2.a. hypothesis: In case of written contracts are the contractual conditions better completed	3.a. hypothesis: Size influences the bargaining position in a positive way	4.a. hypothesis: Those, who are on spot market face the following problems: lack of information, conflicts, difficulties of changing partners, etc.
1.b. hypothesis: The fluctuation of contracts in time, the length of contractual period, entering into contract in a determined time, and the activity of enterprise are in connection with the form of contracts (written contracts)	2.b. hypothesis: Marking the realization price (and quantity) in contracts reduces the price risk	3.b. hypothesis: Associations have a determinant role in vertical integration	4.b. hypothesis: BCE participants are the bigger processors, it has several indications to ignore its use.
1.c. hypothesis: The position in grain sector, and in this way the closer cooperation influences the length of contractual period	2.c. hypothesis: The written contract reduces the realization costs of spot market		4.c. hypothesis: The application of associations, and other forms are not widespread in Hungary
	2.d. hypothesis: Fixing the quality in contracts leads to a better quality of products		4.d. hypothesis: The vertical proprietorial integration covers only 2-3 parts of the sector
	2.e. hypothesis: The possibility of bargaining position is not typical in most of the contracts		4.e. hypothesis: The activity of enterprise and the application of different sales ways are in correlation with each other
	2.f. hypothesis: It is determining which party takes guarantee and/ or assurance in case of application of each sales canals		
	2.g. hypothesis: The opportunity to apply a legal force lacks in most of the cases		
	2.h. hypothesis: In case of each sales canals the characteristics of contracts are different		

Source: Own results

1.   What are the driving forces behind the choice of different controlling structures?

The realization problems of the spot market are: because of the lack of demand and price information, the price risk is high. There are frequent conflicts between the sellers and buyers, due to the lack of permanent connection, as well as the lack of advantages of a long-term, stabile relationship [Lehota, 2003].

The participants of the Budapest Commodity Exchange (BCE) mostly are the bigger processors, the participation of growers is relatively low, there is a lack of admission limits, the growers have shortage of capital, and there is the absence of quality level and stock exchange skills [Lehota, 2003].

In the case of open market coordination, the role of contracts are taken over by the price, and in connection, when a vertical integration is established it is from inner, administration decisions.

In the aspect of buying and realization of prices, the marketing association is a very important institutional form [Lehota, 2003].

The main aim of the growers' realization associations is to represent a suffcent power to stay economically viable, and to have an effective support at the same time.

The characteristic of vertical proprietorial integration relationships in the grain sector is that it usually covers only 2-3 levels of participants of the sector, the connections of mill, pasta-, bakery industries and wholesale trade are determinant, however, the participation of growers in integration forms is really low.

Conclusion

By the questionnaire that was used to collect details about grain sector's participants, a collection of hypotheses was introduced. In this article was presented the method of research. Due to the limited space, the concrete facts and figures and results are not here presented. On the basis of the set up hypotheses, with the help of several variables of mathematical/ statistical processes, the hypothesis examination will be published in a following article as well as discussions with experts, results and aspects of practical application.

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