



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
<http://ageconsearch.umn.edu>
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

THE CONCEPT OF INTEGRATED PROFIT FROM CONTRACTUAL RELATIONSHIP. THE CASE OF TRANSACTIONS BETWEEN AGRICULTURAL PRODUCERS' GROUPS AND AGRI-FOOD SECTOR

Dominika Malchar-Michalska✉

Uniwersytet Opolski

Abstract. The concept of integrated profit offers a theoretical framework for a holistic analysis of contract goals between agricultural producers' groups and agri-food sector. The theoretical background applied in this paper is the contract theory. The primary purpose being the identification of vertical coordination forms between producers' organizations and agri-food sector. Consequently, the specific goal was to recognize price mechanisms in contracts and their analysis in the context of the integrated profit (only in the field of coordination). The research focused on contracts signed in 2014 between groups operating on poultry market and their first buyers. The survey (collection of primary data) was conducted in the period March-May 2015 through the Computer Assisted Telephone Interview. The main first buyer of producers' groups were processing plants. Almost 50% of groups used to sell their outputs through contracts. The fixed price was the most frequently used price formula in contractual relationship. Consequently, more risk were taken by first buyers. The second most popular price formula was the market price on delivery day which can be treated as an unduly burden for producers' organizations, although it may also support production coordination through price signals.

Keywords: contract, integrated profit from contractual relationship, agricultural producers' groups, agribusiness

INTRODUCTION

Contracts play a major role in view of the specific nature of vertical coordination of transactions between specific links in the agri-business chain (in this case, the agriculture and the agri-food sector)¹. In this area, the subsequent forms of vertical transaction² coordination include³ (Peterson and Wysocki, 1997): the spot market, contracts, hybrid organizations⁴ and vertical integration. For the purposes of this paper, a contract is assumed to

¹ Issues involved in contracts are covered by the Polish Civil Code (Ustawa..., 1964). Nevertheless, for the purposes of this analysis, due to the adopted theoretical approach, a contract refers to any and all formal relationships between agricultural producers (agricultural producer groups) and the agri-food sector. This is why no distinction is made between the terms "agreement," "delivery agreement," "contract," "contractual relationships."

² The transaction is assumed to be the basic unit of this analysis, and means (Williamson, 1985) physical transfer of goods, in a broad sense, between the seller and the buyer (including the related property rights).

³ In function of the transaction management method, starting from price signals (the invisible hand of the market), through to external control and a centralized internal decision-making framework.

⁴ In this case, the authors make a distinction between strategic alliances and formal cooperation.

✉ dr inż. Dominika Malchar-Michalska, Zakład Studiów Strategicznych i Polityki Społeczno-Ekonomicznej, Uniwersytet Opolski, Ul. Ozimska 46a, 45-058 Opole, Poland, e-mail: dmalchar@uni.opole.pl

formally regulate (in writing) the parties⁵ rights and obligations regarding physical delivery and transfer of ownership of the subject matter of a transaction (agricultural outputs). The basic components covered by the contract are the price, delivery date, quantity, and validity term. Additionally, the contract may include provisions governing the quality, agro-technical and zoo-technical assistance, financial support, requirements for seed and breeding materials, plant protection products used, field inspections, planting and harvesting schedule, production certification etc. With regard to areas regulated under agreements, MacDonald et al. (2004) established the categories of marketing and production contracts in the agriculture sector. The first category defines the price mechanism, delivery dates and validity term (and may mention the quality). Under these agreements, farmers are entirely free to manage their production process of agricultural outputs. In addition to the above basic components, the second type of agreements also includes detailed provisions on each party's rights and obligations. The buyer specifies or, in some cases (depending on his bargaining position versus the producer), even decides about the production process. Note that there are production-management contracts and resource-providing contracts.

The reason for conducting research in this area are the potentially manifold aspects that affect both transacting parties. Therefore, an attempt was made to use the concept of integrated profit from agreements in order to study the contractual relationships between agricultural producer's groups operating on poultry market and their first buyers. The primary purpose was to identify the forms of vertical coordination of transactions between the above operators, whereas the specific objective was to recognize the price mechanism used in agreements.

THE CONCEPT OF INTEGRATED PROFIT FROM CONTRACTUAL RELATIONSHIP

In the relevant Polish literature which mentions the contracts between the agriculture and the agri-food sector, agreements are mainly considered to be the basic risk management instrument⁶. Focusing solely on contracts

as one of the risk coordination mechanisms seems to be a narrow perspective, as it fails to address issues such as: production of agricultural raw materials at the right time and place; the moment of transferring the ownership thereof; the role of agricultural producers and processors in coordinating the agricultural production process; incentives used in agreements to stimulate the right behavior of contractors; costs involved in activities that include finding a business partner; the need to make an investment (mainly for the agricultural producers) prior to signing the agreement; and the costs of conclusion and performance of the agreement. The integrated profit⁷ is a concept that attempts to globally analyze the topic of contracts (for both transacting parties). Used as a theoretical background, the theory of contracts⁸ includes the principal-agent problem, the transaction cost economics, and the theory of property rights. An advantage of this approach is the attempt to use the conclusions from the stylized facts analysis based on the theory of contracts (or single theories within the scope thereof) in order to search for an optimum contract form for the economic practice in agri-business. This concept is based on the idea of multiple defined objectives (hierarchy of objectives) to be taken into account by both transacting parties (agricultural producers or their associations and the agri-food sector⁹) before entering into the agreement. Thus, the key objective of a contractual

links, including: vertical capital integration of companies, contract-based integration (which reduces the risk involved in: selling raw materials; purchasing productive inputs; sales price levels; timeliness; or quantities); b) diversity of agricultural production. A broader description of risks and results of studies on risk management instruments in the agriculture and their use in Polish farms may be found in: (Jerzak, 2008b; Jerzak and Czyżewski, 2006; Śmiglak-Krajewska, 2014).

⁷ The part of the subsection below on the integrated benefit concept was based on (Bogetoft and Olesen, 2004). Corresponding annotations are provided for all other sources used in this paper.

⁸ The following assumptions are made for further deliberations, including empirical research: the contracts are incomplete; an agent/principal relationship exists between the contracting parties; individuals are reasonable to a limited extent; the individuals' behavior is governed by opportunism; individuals involved in the contracting process demonstrate limited analytical capacities, and therefore the contracting procedure they opt for will be only apparently the best option, and their choices and behavior depend on limited information resources.

⁹ Note the issue of divergent objectives pursued by each of the transacting parties.

⁵ Producers' groups/providers of agricultural outputs/contractors of the agent and first buyer/buyer/principal.

⁶ According to Jerzak (2008a), individual instruments for risk control with physical measures include: a) vertical integration

relationship is assumed to be achieving the maximum integrated profit or, in other words, the optimum total benefit from the contract for both transacting parties¹⁰.

As a part of integrated benefit, there are three basic spheres of objectives: coordination, motivation and transaction costs (Fig. 1). The first one (coordination) means an optimum synchronization of basic elements for each transaction i.e. agreeing on the price (price mechanism), quantities to be delivered, delivery schedule, outputs quality, agricultural inputs used etc. The second one (incentive) focuses on establishing individual incentives aimed at private benefits for the contractors so as to enable optimum coordination¹¹. According to the assumptions, an effective contract means one that enables optimum coordination and incentive at the lowest costs. In this case, this means the effective achievement of the lowest possible transaction costs¹².

In this paper, the empirical analysis of contracts was narrowed down to the first area of integrated profit, i.e. coordination which is divided into production coordination and risk coordination. In the first case, there are two potential coordination methods: a hierarchical planning guidance (e.g. enclosed as an appendix to the contract¹³)

or price signals¹⁴ (the market approach). In turn, risk coordination¹⁵ refers to two major problems, i.e. the distribution of risk between the transacting parties¹⁶ and risk minimization. As regards the risk, the parties of a transaction should seek such a risk distribution and minimization method that allows, on one hand, to achieve the lowest possible costs and, on the other, to establish adequate incentive for the parties to comply with the adopted provisions (especially as regards the behavior of farmers).

Note also that agricultural producers are exposed to such risk types as general (weather) risk or price risk. Contractual relationships provide the ability to share that risk between the parties. In the case of the first risk type, this can be done through the adopted price formula¹⁷. It is assumed that the price risk should be borne primarily by the party demonstrating less risk aversion (in this case, the processor). Then, it is possible to stipulate a fixed price in the contract. As regards risk minimization, two solutions are proposed: the use of a fixed (predefined) price and the avoidance of long-term contracts (though it may result in behavioral uncertainty of the farmer or farmer's organizations)¹⁸. Just as in the

¹⁰ The agreement that would result in achieving the maximum integrated benefit is referred to as the first best contract, and is a Pareto efficient contract. However, in practice, due to divergent objectives pursued by each of the transacting parties and the need to make a compromise (mutual concessions), a contract that may be described as the second best solution is signed.

¹¹ As the agent and principal pursue conflicting objectives, there are significant difficulties in achieving the maximum integrated benefit. A particular conflict of objectives exists between coordination and motivation goals, and is mainly caused by the dual role of prices in the contract. On one hand, the adopted price mechanism may minimize the price risk borne by the agricultural producer (e.g. fixed price). On the other hand, the mechanism deployed does not include any incentive for the farmer to produce the agricultural outputs in accordance with the processor's expectations (the issue of opportunism).

¹² As defined by Demsetz (1968), these are transferring costs of property rights in the market exchange process. The diagram shows four types of transaction costs. The definitions of the first three are convergent with those specified by Williamson (1998). The last type was formulated by Milgrom and Roberts (1990).

¹³ This is a part of hierarchical planning. The contractor/principal decides of the production process (e.g. the feed to be used) while the farmer is required to perform it as provided for in the agreement.

¹⁴ In accordance with a neo-classical assumption, the exclusive use of the market mechanism and price signals for the purposes of production coordination should result in the optimum allocation of goods (which is therefore a Pareto optimal solution). Meanwhile, hierarchical planning seems necessary wherever the processor must adjust his production line to the farms' production cycle (e.g. if the raw material must be delivered within strictly defined timeframes after harvesting). These methods may be combined under a contract.

¹⁵ The risk is a cost driver. The costs of risk are measured with the risk premium, defined as the difference between the expected price and the guaranteed price; both of them generate the same utility for the agent.

¹⁶ The farmers are assumed to adopt a passive approach to risk. Agricultural processors are seen as economic operators that adopt a less passive, or neutral, approach to risk. This is because they usually have a stronger market position and are able to diversify their market behavior. Therefore, they should bear a larger share of risks, or even the entire risk (though it is inconsistent with the incentive area).

¹⁷ A way of alleviating this problem is to define the payments with use of the relative performance evaluation, specifically including the solutions proposed as a part of the yardstick competition concept (Schleifer, 1985).

¹⁸ A fixed price secures the farmers against an unfavorable evolution of prices of raw materials intended for processing. However, in the case of long-term contracts, inflation and the possible increase in production costs also need to be taken into

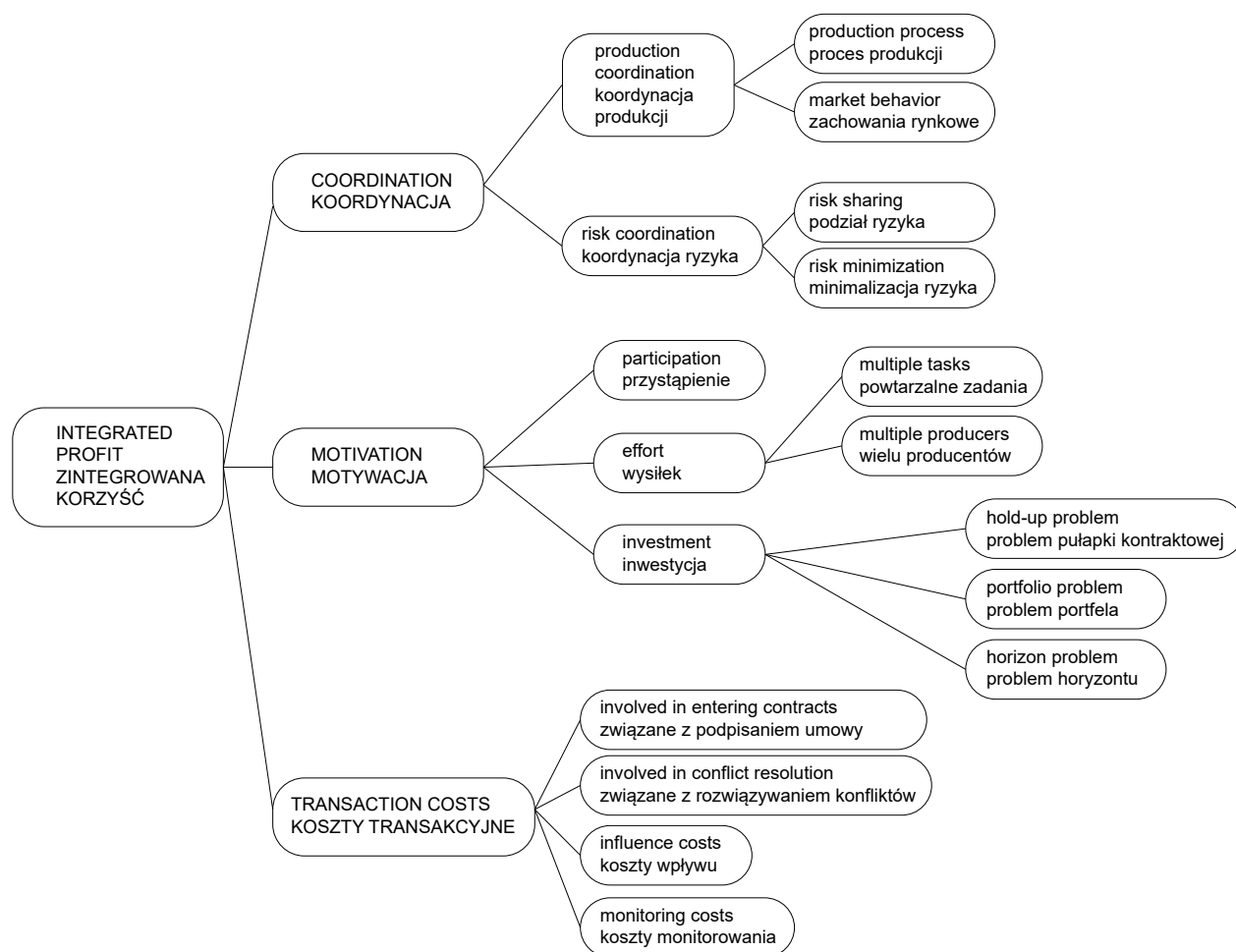


Fig. 1. Hierarchy of goals for integrated profit from contractual relationship

Source: Bogetoft and Olesen, 2004, p. 47.

Rys. 1. Hierarchia celów w ramach zintegrowanej korzyści z powiązań umownych

Źródło: Bogetoft i Olesen, 2004, s. 47.

case of coordination, the most important thing is to establish the adequate price mechanism.

Thus, the price mechanism plays a key role in the coordination area in respect both to production and risk. The contracting parties may use several options, including: fixed price formulas (with a fixed price throughout the term; the base price is adjusted upwards/downwards

with defined criteria, e.g. quality, timeliness); or formulas with some kind of variable price (e.g. the market price as of delivery date; price based on the wholesale price of a specific agricultural outputs). When analyzing the risk and the price formula, another important factor are the price review clauses, especially if the parties opt for a fixed price. Also, the term of the agreement needs to be taken into account as a part of risk analysis. For instance, long-term agreements with a defined fixed price with no price review clauses for either party will not be an optimum solution (having regard to risk distribution and minimization).

account, and may result in increasing (rather than reducing) the price risk. Entering into long-term agreements seems beneficial if, in addition to a fixed price, the contractual provisions include price review clauses or price indexes.

RESEARCH METHODOLOGY

The primary purpose of this paper was to identify the forms of transaction vertical coordination between agricultural producers' groups¹⁹ and the agri-food market (hereinafter, the "first buyer"²⁰). The specific purpose was to discover the price mechanism used in the agreements and analyze it in the context of production and risk coordination (based on the concept of integrated benefit from contractual relationships). In view of the defined research issue, the subject matter of the analysis were the contracts entered into in 2014 between producer groups operating on poultry market²¹ and their first buyers. The research process was as follows:

- a) Stage 1: identifying the vertical transaction coordination mechanism; specifying the forms of vertical coordination (spot market, contracts) and determining their sales share;
- b) Stage 2: identifying the groups who entered into new agreements with their first buyers in 2014; determining the number of new agreements and identifying the first buyer;
- c) Stage 3: analyzing the agreements entered into in 2014; identifying the price mechanism and the price review clause;
- d) Stage 4: analyzing the subjective feedback on contractual relationships from the representatives of the groups considered.

¹⁹ In this survey, groups of agricultural producers were selected using purposive sampling, primarily because of the functions they should fulfill in the agribusiness in accordance with their original objective. These tasks include: stabilizing the supply on agricultural markets; stabilizing the farmers' (group members') income; meeting the requirements of the agri-food sector as to the quantity (consolidation of large delivery batches) and quality of agricultural outputs (including the delivery schedule aligned with the production process in the processing sector). Also, these groups are intuitively believed to demonstrate a relatively higher share of transactions performed within formal relationships than individual farms.

²⁰ The first buyer is the operator who entered into the agricultural outputs sales agreement. In this study, several first buyers are identified, including: processing plants, distribution centers, commercial networks, local retail stores, local marketplaces, public sector institutions and other (with a specification thereof).

²¹ According to pilot studies conducted in 2014 and 2015 (with the use of the survey questionnaire tool) among groups of agricultural producers active in various agricultural industries, operators active in the poultry market tend to demonstrate a relatively high share of contractual relationships. This also results from the specific nature of that industry itself and of the first buyer (processing plant).

Due to the specific nature of the subject matter of this research, case study was assumed to be the basic research method (Wójcik, 2013)²². The research tool was a computer-assisted phone interview based on a survey questionnaire. It included 16 personal data questions and 52 questions on functions of the agricultural producers' group; main sales channels; transaction coordination; characteristics of contractual relationships. Various types of questions were used: open questions, single choice questions, multiple choice questions. The code matrix included 404 variables²³. The survey was conducted from March to May 2015²⁴.

In this survey, the total population was composed of poultry producer groups entered to the register of groups operate in Poland and established by the end of 2013 (the register is kept by voivodeship marshals having competence over the seat of respective groups; a consolidated version is also available in the list kept by the Ministry of Agriculture and Rural Development). The total population of poultry producer groups²⁵ (registered by the end of 2013) was 274. Initially, when selecting the sample, efforts were made to achieve representativeness at branch level²⁶ (160 operators would need to be covered by the survey). The exhaustive random sampling scheme was used. However, due to high rejection rates (in the entire survey, the average refusal rate across all industries was two thirds approximately), it was possible to obtain a sample with a size of 67 (questions were answered by group leaders or their authorized representatives)²⁷.

²² It is also applied in studies with New Institutional Economics (NIE) used as the theoretical background. Case studies used as a part of NIE are referred to as analytical narratives. Also, this method allows to analyze the relationships between a selected theoretical structure and the object of studies (impact of institutions, institutional developments etc.) (see Alston, 2008).

²³ This paper focuses on analyzing a small fraction of data acquired.

²⁴ This paper presents a part of the research conducted within the research project No. UMO-2011/03/D/HS4/03386 financed by the National Science Center.

²⁵ Groups active in the market, as listed in the register: live poultry, poultry meat and edible offal–fresh, chilled and frozen chicken (hereinafter, poultry).

²⁶ Under the following assumptions: level of confidence: 95%, sampling fraction: 0.5, maximum error: 5%.

²⁷ As regards spatial distribution, the operators considered were located in fourteen voivodeships (except for the Małopolskie and Podkarpackie voivodeships). Number of members: 603.

RESULTS OF THE STUDY

In 2014, around 19% of the surveyed groups made 100% of their sales volume through the spot market while around 50% of the groups sold their entire agricultural outputs volumes through contracts (production or marketing agreements²⁸). As demonstrated in the study, transactions were entered into mainly with processing plants²⁹ (the destination³⁰ of the entire raw material volume for 73% of the surveyed groups). Intuitively, it may be assumed that the specific nature of the poultry industry (agricultural outputs intended for processing, relatively significant barriers to entry in the retail market etc.) and the fact that processing plants were the main buyer, were determinant for the relatively high share of formal contractual relationships used as the transaction framework.

Subsequently, the groups who signed new buyer agreements in 2014 were separated from the sample. During the survey, 36 of them were identified (54% of the population considered³¹). On average, each of them

signed around 5 new contracts (arithmetic mean) with a mode and median of 3, and a skewness coefficient of 2.25 (positively skewed distribution). Note that 34% of them were one-year agreements, 38.6% were long-term agreements (2 and 3-year or longer) and 21% were agreements for a specific number of deliveries³². 49.6%, 39.7% and 10.7% of the agreements were entered into during, prior to or upon completion of the production cycle, respectively.

Table 1 shows the identified price formulas in agreements between the groups and their first buyers. In the contracts under consideration, the predefined fixed price was the most frequent (60% approximately) mechanism. Another relatively frequent formula was the price on the delivery date (17.8% approximately)³³. Two extremely different price mechanisms, applied both to production coordination and to risk management, were prevalent in the contracts. As specified in section 2 of this paper (the concept of integrated profit from contracts), the fixed price formula may be disadvantageous, especially in

²⁸ Later in this paper, both agreement types are considered to be contractual relationships. Note that the question was whether in 2014, the group carried out sales under a contract or agreement or without any agreements. Thus, agreements could be entered into in other years (long-term agreements).

²⁹ Usually, the respondents specified such buyers as Animex, Indykpol, Wipasz, Adros Sp. z o.o., Er-Drob poultry plant, Stasin poultry plant.

³⁰ The respondents did not sell to public institutions or retail stores. 3% of the groups generated up to 25% of their sales volume in local marketplaces.

³¹ 19% of the population carried out sales operations under pre-existing agreements (entered into before 2014). In turn, 27% of the groups did not sign any new agreement in the year

concerned. The following was identified as the main reason: informal relationships with the buyer; avoidance of problems related to contractors and requirements set out in the contract; simple, fast sales on the spot market; the contractor's reluctance to sign an agreement.

³² 5% of the agreements were classified as "other" (with no explanation).

³³ As regards the "market price on delivery day" formula, the respondents were asked to specify the basis for determining the price. The answers included: prices in other slaughterhouses, the average (indicative) market price. Also, the use of that mechanism may be related to a relatively low volatility (compared to other agricultural raw materials) in poultry market prices (Chlebicka et al., 2008). Nevertheless, this should be confirmed under a more detailed market research.

Table 1. Price formulas in contracts signed in 2014 (%)

Tabela 1. Formuły cenowe w umowach zawartych w 2014 roku (%)

Fixed price Z góry ustalona cena	Fixed price + quality <i>bonus</i> Cena stała + premia za jakość	Fixed price + <i>bonus</i> for delivery on time Cena stała + premia za terminowość	Price per unit Cena jednostkowa	Guaranteed price, formula: not lower than... Cena gwarantowana, formuła ni- ższa niż...	Market price on delivery day Cena rynkowa z dnia dostawy	Other Inna
60.5	8.7	2.5	5.7	1.2	17.8	3.6

Source: own research.
Źródło: badania własne.

Table 2. Price clauses of contract signed in 2014 (%)

Tabela 2. Klauzule waloryzacyjne w umowach zawartych w 2014 roku (%)

Contracts without clauses Umowy bez jakiegokolwiek klauzuli	A price change at least once a month based on... Zmiana ceny nie rzadziej niż raz w miesiącu w oparciu o...	Price changes based on outputs prices on local wholesale (or other market) Zmiana ceny dokonywana w oparciu o ceny produktu na lokalnym rynku hurtowym (lub innym)	During the high price fluctuation on agricultural output market, the price can be changed often than once in the month W okresie dużych wahań cen hurtowych związanych z pojawieniem się na rynku surowców z nowych zbiorów cena może ulec zmianie częściej niż raz w miesiącu	Revision considering exchange rate PLN/EUR changes comparison to a exchange rate in the day signed contract (fixed price formula in contract) Rewizja ze względu na zmianę kursu PLN/EUR w stosunku do średniej kursu z dn. zawarcia umowy (cena uzgodniona przed dostawą)	Other Inna
25	43	11	6	5	10

Source: own research.

Źródło: badania własne.

long-term agreements. This is why price review clauses were also covered by this survey. The types of adopted price review clauses are specified in Table 2. Nearly 25% of the agreements contained no review clauses. “Price change at least once a month”³⁴ was the clause

used usually (in 42.5% of the agreements). No price indices were identified in the analyzed agreement data.

Table 3 shows the selected subjective feedback from respondents on the tasks/objectives that may be fulfilled with the use of their agreements. They believe

³⁴ Two groups declared to use the review clause due to evolution of currency exchange rates, even though they had agreements in place with a domestic buyer. Among the surveyed groups who signed agreements in 2014, only one exported the entire volume of raw material to Lithuania (the price was determined based on prices monitored and specified by the Ministry of Agriculture and

Rural Development). Note also that as regards the “other price review clause” category, the respondents explained their agreements included a provision enabling them to change the price every week (or more frequently), or a statement that the price is the average price from five processing plants designated by the first buyer.

Table 3. The self-assessment of the producers' organizations functions of contracts signed in 2014

Tabela 3. Ocena grup odnośnie do funkcji realizowanych przez kontrakty zawarte w 2014 roku

Specification Wyszczególnienie	Guarantee sale Pewność zbytu	Production adjustment to quality and quantity Dostosowanie produkcji do wymogów jakościowych i ilościowych	Less flexibility of sale Mniejsza elastyczność sprzedaży	Additional costs Dodatkowe koszty	In reality too long period of payment Realnie zbyt długi okres zapłaty
1	2	3	4	5	6
Measures of a central tendency – Miary tendencji centralnych					
Arithmetic mean Średnia arytmetyczna	4.6	4.1	2.8	2.8	2.9
Mode Dominanta	7	4	3	1	4
The first quartile Kwartył I	3	2	1.75	1	1.75

Table 3 cont. – Tabela 3 cd.

1	2	3	4	5	6
The third quartile Kwartył 3	7	6	3.25	3	4
Median Mediana	5	4	3	3	3
A measure of the asymmetry – Miary kształtu rozkładu					
Skewness Skośność	-0.3776	-0.0725	1.0601	1.0005	0.7514
Measures of dispersion – Miary rozproszenia					
Variance Wariancja	4.7587	4.2373	2.6349	3.4349	2.8214
Standard deviation Odchylenie standardowe	2.1815	2.0585	1.6232	1.8534	1.6797

Note: the study used a seven-level scale of Likert (1 – totally disagree..., 7 – I totally agree)

Source: own research.

Uwaga: w badaniu wykorzystano siedmiostopniową skalę Likerta (1 – całkowicie się nie zgadzam..., 7 – całkowicie się zgadzam).

Źródło: badania własne.

the key function is the guaranteed sale of the agricultural outputs (an average score of 4.6 with a mode of 7) and the ability to adjust their production to the contractor's qualitative and quantitative requirements (an average score of 4.1 with a mode of 4). In the analyzed groups (parties to contracts entered into in 2014), the agreements did not require any additional expenditure and nor less flexibility of sale. The feedback on payment delays may also be interpreted positively. According to data acquired, the contractors made timely payments for agricultural outputs purchased under their agreements.

CONCLUSIONS

Contracts are seen primarily as one of the basic risk management instruments in the agribusiness. However, as emphasized in this paper, this means looking at the contractual relationships issue from a narrow perspective. A holistic approach to contract functions allows to address this topic in a broader context, i.e. in the framework of three objectives: coordination, motivation and transaction costs. Referred to as “integrated profit from contracts,” this holistic approach provides an important advantage which is the ability to analyze the outcomes of signing the contracts for both transacting parties.

In this paper, the analysis was narrowed down solely to the transaction coordination issue and to the role of the implemented price formula in that area.

The following may be concluded based on this survey:

- The “fixed price” (predefined price) formula was prevalent in contracts between agricultural producer groups and their first buyers. When used to distribute the risk among the contractors, such a formula makes the first processor assume a higher risk. For the group, the use of such a mechanism may appear to be an advantageous solution. This is because if the agreements are long-term contracts and are based solely on fixed prices, then in the case of an increase in prices of agricultural outputs (which also means increased production costs) during the contract term, the price stipulated in the contract will be disadvantageous to the producer (and, thus, such solution will not result in minimizing the total risk).
- The second most frequently used mechanism was the “price on delivery day” which, in turn, is more burdensome to poultry producer groups (in terms of risk distribution). Based on the assumption that the producer group will demonstrate more risk aversion than the first buyer, this does not seem to be the optimum solution. Note however that the use of such

a formula is one of the forms of production coordination through price signals.

- Price formulas containing an incentive for the agricultural producer group were relatively rare in the contracts (quality incentive or timeliness incentive bonuses; an approximate total of 11.2% agreements included such clauses).
- While nearly one quarter of the agreements did not include any review clauses, the “price change at least once a month” clause was the most frequent one, as it allows to minimize the general risk, especially in the case of long-term contracts.
- The above results suggest that the contractual relationships in place (narrowing this analysis down to the coordination area and to the price formula used) may be sub-optimal (even as the second best solution). The author believes that this could result from both transacting parties' failure to identify the consequences of using a specific price formula, especially in view of the contract term. Another possible reason is the unawareness of other potential solutions in this area. However, this should be confirmed under a dedicated research project.
- According to representatives of agricultural producer groups, in 2014, the key functions of their contracts were the guaranteed sale and the ability to adjust their production to the contractors' qualitative and quantitative requirements.

REFERENCES

- Alston, L. J. (2008). The „Case” for Case Studies in New Institutional Economics. In: E. Brousseau, J.M. Glachant (Eds.), *New Institutional Economics. A Guidebook* (p. 103–121). New York: Cambridge University Press.
- Bogetoft, P., Olesen, H. B. (2004). *Design of Production Contracts. Lessons from Theory and Agriculture* (p. 45–70). Copenhagen: Wyd. Copenhagen Business School Press.
- Chlebicka, A., Fałkowski, J., Wołek, T. (2008). *Powstawanie grup producentów rolnych a zmienność cen* (p. 1–17). Warszawa: FAPA.
- Demsetz, H. (1968). The Cost of Transaction. *Quart. J. Econ.*, 82(1), 33–53.
- Kodeks cywilny (2016). Retrieved May 20th 2016 from: <http://kodekscywilny.prv.pl/kodeks-cywilny-13.html>.
- Jerzak, M. A. (2008a). Indywidualne instrumenty zarządzania ryzykiem produkcyjnym, dochodowym, cenowym w rolnictwie. In: M. Hamulczyk, S. Stańko (Eds.), *Zarządzanie ryzykiem cenowym a możliwości stabilizacji dochodów producentów rolnych* (p. 59–72). Warszawa: IERiGŻ–PIB.
- Jerzak, M. A. (2008b). Zarządzanie ryzykiem jako czynnik stabilizacji dochodów i poprawy konkurencyjności w rolnictwie. *Rocz. Nauk. SERiA*, X(3), 245–251.
- Jerzak, M. A., Czyżewski, A. (2006). *Ekonomiczne uwarunkowania wykorzystania rynkowych narzędzi stabilizacji cen i zarządzania ryzykiem w rolnictwie*. Poznań: Wyd. AR.
- MacDonald, J., Perry, J., Ahearn, M., Banker, D., Chambers, W., Dimitri, C., Key, N., Nelson, K., Southard, L. (2004). *Contracts, Markets, and Prices. Organizing the Production and Use of Agricultural Commodities*. *Agric. Econ. Report*, 837, 3–6.
- Milgrom, P., Roberts, J. (1990). Bargaining Cost, Influence Cost, and the Organization of Economic Activity. In: J. Alt, K. Shepsle (Eds.), *Perspectives on Positive Political Economy*. Cambridge: Cambridge University Press.
- Peterson, H. Ch., Wysocki, A. (1997). The Vertical Coordination Continuum and The Determinants of Firm–Level Coordination Strategy. Michigan State University, Staff Paper No 97–64, June, 1–18.
- Schleifer, A. (1985). Theory of Yardstick Competition. *Rand J. Econ.*, 16(3), 319–327.
- Śmiglak-Krajewska, M. (2014). Sposoby ograniczania ryzyka w gospodarstwach rolnych z terenu województwa kujawsko-pomorskiego. *Rocz. Nauk. Ekon. Roln. Rozw. Obsz. Wiej.*, 101(4), 136–143.
- Ustawa z dnia 23 kwietnia 1964 r. Kodeks cywilny (1964). *Dz. U.* 1964 Nr 16 poz. 93, art. 613–626.
- Williamson, O. E. (1985). *The Economic Institutions of Capitalism* (p. 1–14). New York: Free Press.
- Williamson, O. E. (1998). *Ekonomiczne Instytucje kapitalizmu* (p. 29–55). Warszawa: Wyd. Nauk. PWN.
- Wójcik, P. (2013). Znaczenie studium przypadku jako metody badawczej w naukach o zarządzaniu. *E-mentor*, 1(48). Retrieved May 15th 2016 from: <http://www.e-mentor.edu.pl/artukul/index/numer/48/id/983>.

KONCEPCJA ZINTEGROWANEJ KORZYŚCI Z POWIĄZAŃ UMOWNYCH. PRZYKŁAD PIONOWEJ KOORDYNACJI TRANSAKCJI MIĘDZY GRUPAMI PRODUCENTÓW ROLNYCH A SEKTOREM ROLNO-SPOŻYWCZYM

Streszczenie. Koncepcja zintegrowanej korzyści umożliwia holistyczną analizę celów realizowanych w ramach kontraktów między rolnikami lub organizacjami producentów rolnych a rynkiem przetwórstwa rolno-spożywczego. Wykorzystanym podejściem była teoria kontraktów. Jako cel główny artykułu przyjęto identyfikację form pionowej koordynacji transakcji między grupami producentów rolnych a rynkiem rolno-spożywczym. Celem szczegółowym było zaś rozpoznanie mechanizmu cenowego w umowach i analiza przy wykorzystaniu koncepcji zintegrowanej korzyści (rozważania zawężono do obszaru koordynacji). Przedmiotem badań były kontrakty podpisane w 2014 roku między grupami producentów działającymi na rynku drobiu a pierwszym odbiorcą. Podstawowym narzędziem badawczym był wspomagany komputerowo wywiad telefoniczny. Badanie przeprowadzono w okresie marzec – maj 2015 roku. Głównym pierwszym odbiorcą surowca od grup producentów były zakłady przetwórcze. Blisko połowa organizacji całość sprzedaży realizowała w ramach powiązań umownych. W analizowanych kontraktach dominowała formuła „cena stała”, co skutkowało większym ryzykiem pierwszego odbiorcy. Drugim często stosowanym mechanizmem była „cena z dnia dostawy”, która z kolei w nadmierny sposób obciążała grupę, choć pozwalało to na koordynację produkcji poprzez sygnały cenowe.

Słowa kluczowe: kontrakt, zintegrowana korzyść z powiązań umownych, grupy producentów rolnych, agrobiznes

Accepted for print – Zaakceptowano do druku: 06.09.2016