THEORY OF CONTRACTS IN THE LIGHT OF NEW INSTITUTIONAL ECONOMICS. THE SPECIFICITY OF AGRICULTURAL CONTRACTS

Marzena Lemanowicz

Warsaw University of Life Sciences – SGGW

ABSTRACT

The article reviews Polish and foreign economic literature regarding new institutional economics (NIE) and various research approaches used in the framework of NIE. Particular attention was paid to the economic theory of contracts and the transaction costs, as the limitation of transaction costs is indeed the main stimulus for contract signing. Special attention was given to agricultural contracts and their specificity. The article discusses different theories applied in the analysis of contracts, characterizes contracts according to different criteria, and draws attention to the importance of transaction costs in the theory of contracts. In addition, factors which contribute to these costs have been identified, indicating the necessity of adapting the principles of transaction cost economics to the needs of the agricultural sector.

Key words: new institutional economics, contracts, agricultural contracts, transaction costs

INTRODUCTION

For nearly 30 years, Polish agriculture has undergone numerous transformations. The functioning of agriculture and its connections with the surroundings were significantly affected by the introduction of market economy after 1989 and Polish accession to the European Union. Add to this many transformations associated with changes in the supply changes of agricultural and food products, breaking of cooperative ties after 1990, development of retail chains, high concentration of food industry compared to agricultural production, and introduction of high quality expectations at all levels of the food chain. All this means that Polish agriculture now has to build up a competitive position from scratch, compounded by the asymmetry of market power between agricultural producers and agricultural and food processing companies or retail chains. Which is why the question of agricultural contracts and the need of further development of contracting in farming is being reassessed.

The general aim of this paper is to characterise various study approaches used to interpret and explain the contract theory in the new institutional economics (NIE) framework. Particular aims boil down to:

− discussion of various theories applied in the analysis of contracts;
− the characterisation of contracts with special reference to agricultural contracts and the factors which favour signing agricultural contracts;
− the identification of main contract types with particular reference to those present in the agricultural market;
− the characterisation of transaction costs accompanying contracts;
− identification of factors which contribute to generating transaction costs.
MATERIAL AND METHODS

The deliberations below are purely theoretical. For the purpose of this paper, a review was carried out of both Polish and foreign economics literature concerning new institutional economy (NIE) and various research approaches used within its framework. The economic theory of contracts and transaction cost economics were paid particular attention, as the limitation of transaction costs is indeed the main stimulus for contract signing. Then, special attention was given to agricultural contracts, their specificity, and the necessity of adapting the principles of transaction cost economics to the needs of the agricultural sector. The starting point of the theoretical deliberations presented in this paper is the 1937 article by Coase, which contributed to the rising interest in transaction costs and the later use of this approach in the analysis of economic phenomena.

NEW INSTITUTIONAL ECONOMICS – ORIGINS AND KEY CONCEPTS

The year recognised as the birth date of new institutional economy (NIE) is 1937, when Coase published his article entitled The nature of the firm. In it, Coase introduced the concept of transaction cost for the first time. Initially, the paper did not attract much interest among scholars and its impact on them was negligible [Coase 1993]. His theories aroused interest only in the 1960s and 1970s. Many economists began developing the transaction cost theory, and attempts were made to apply the new approach in the analysis of economic phenomena as well. In its early period of development, NIE sought to expand the application of the neoclassical theory. However, as a growing number of economists were becoming dissatisfied and critical towards the neoclassical models of production and exchange [Furubotn and Richter 2003], according to Williamson new institutional economics grew from the positive critique of orthodox economics [Williamson 2000, Danilowska 2007]. It was Williamson who put the expression new institutional economics into circulation in his 1975 book titled Markets and Hierarchies [Williamson 1975]. The moniker “new” was meant to distinguish the NIE method from the so-called old institutional economics, represented by such economists as Veblen, Commons, Mitchell, and Ayres [Kowalska 2005].

New institutional economics (NIE) is a wide area of research and, as stressed by Hockuba [2001], it is not entirely methodologically uniform. Some of the most important study programmes within NIE include the following [Williamson 1985, 1998, 2000, Furubotn and Richter 1997, Iwanek and Wilkin 1997, Hockuba 2001]:

1. The economic theory of contracts and agency theory, which are involved in the issue of information asymmetry and the formulation of contracts, to make the stimulus structure and methods of enforcing contractual rights and obligations contained therein contribute to the realisation of contractual partners’ goals.
2. Transaction cost economics, which focuses on the transaction cost category and questions of contract execution.
3. The theory of property rights, which analyses the impact of the property-right structure on the economy.
4. The economics of public choice, which applies the research methods of neoclassical economics to analyse the functioning of public institutions such as governments, parliaments, public organisations, etc.
5. Constitutional economics and political economics.

The economic theory of contracts and transaction cost economics, where contract is the basic unit of study, are the most significant for the purposes of this paper. Besides such concepts as contract or transaction cost, institution is a key concept in NIE. The most popular and most frequented definition comes from North [1990], who wrote that “institutions are the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction. (…) Institutional constraints include both what individuals are prohibited from doing and, sometimes, under what conditions some individuals are permitted to undertake certain activities”. Institutions can be both informal (sanctions, taboos, customs, traditions) and formal (laws, property rights, contracts). Though in ordinary language the concepts of institution and organisation are frequently identified, institutionalists
point out their different semantic scopes. Organisations are founded to realise and enforce institutions [Gancarczyk 2002]. Thus, should institutions be defined as game rules, organisations can be considered as the makers of new rules of the game.

**APPROACH TO CONTRACTS IN NEW INSTITUTIONAL ECONOMICS**

New institutional economics and its four pillars: the transaction cost theory, the theory of agency, the theory of property rights, and the theory of public choice, adopted transaction as the basic unit of analysis. A transaction with a clearly outlined structure in which the transactors assume specific obligations can be referred to as a contract [Masten 2000]. From the point of view of economics, a contract is viewed as an agreement between at least two parties (partners, contractors, agents) with regard to their mutual obligations relating to a given exchange relationship [Malchar-Michalska 2018]. According to Furubotn and Richter, a contract can be understood as a bilateral transaction in which both parties agree on their obligations. Beside the agreement between parties regarding their relations, the presence of legal sanctions (legal enforcement) is considered as a characteristic trait of a contract [Iwanek and Wilkin 1997].

The adoption of transaction as the basic unit of analysis in NIE is a different perception of a firm. In institutional economics firms are treated as bundles of contracts in a specified regulation structure. The entrepreneur concludes contracts with employees, contractors, suppliers, and recipients. Consequently, firms may arise which function exclusively on the foundation of external firms which realise the main operations and whose role is limited to coordinating specific activities. The comparison of transaction costs is the basis of choice. The firms that accede to an agreement include in it the attributes of the transaction: the specificity of assets, frequency and uncertainty, the intensity of which affects the granularity of a contract and, in consequence, the level of transaction costs [Tyc and Schneider 2017, after Williamson 1998]. Contract analysis commonly uses transaction cost economics and agency theory. Emphasising the occurrence of transaction costs which, contrary to the neoclassical theory, are greater than zero, should be credited to Coase (the author of *The Nature of the Firm*). Coase argued that every transaction concluded in the economy is accompanied by various costs which, as a sum, correspond to friction forces in a physical system. Williamson [1998] divided transaction costs into ex ante costs – associated with preparing, negotiating, and securing the agreement, and ex post costs – arising from the inadequacies of the agreement and the ensuing need to resolve disputes, renegotiate, control, etc. Another division is the concept proposed by North and Wallis [1986] who differentiate measurable and measurable costs. Not all expenses related to a transaction can be presented with a monetary value, therefore they are not included in measurable costs. For example, the time taken to prepare a transaction is difficult to estimate, but it is undoubtedly a transaction cost. Both approaches – Williamson and North, Wallis are complementary to each other. Hardt [2008] also emphasizes that various contracting phases involve different types of transaction costs. There are three main periods in the contract business: the preliminary period during which the company sees an opportunity to make a profit; the initial period in which the parties adapt their internal structures to the new conditions; and the contracting period, i.e. the time in which the exchange is carried out on the terms specified in the contract. Furubotn and Richter [2000] distinguish market transaction costs, managerial transaction costs, and political transaction costs. Among market transaction costs they include the costs of preparing a transaction (e.g. costs of looking for partners, communication costs, promotional costs), costs of the final contract: the costs of negotiating and making the decision, costs of monitoring and performance of contractual obligations. Managerial transaction costs may include the costs of creating, maintaining, and changing organisation plans as well as the costs of operating the firm (decision-making costs, monitoring of order fulfilment, information management costs, etc.). Political transaction costs are not relevant for this paper. Generally speaking, transaction costs do not have a clear definition in the theory of contracts. What is more, operationalising transaction costs and thus finding an unambiguous method to measure them is a significant problem. Just to isolate...
transaction costs from the entire costs of a firm is wrought with difficulty, and, when we are finally able to isolate these costs, we usually use the comparative institutional analysis method.

As Williamson [1998] claims, limited rationality, opportunism, and specificity of assets are the main factors which contribute to generating transaction costs, while signing contracts is a method to reduce transaction costs. Limited rationality is a characteristic of the discrepancies in information held by the parties to a contract. Opportunism is revealed by taking actions to the detriment of the other contractor, while specificity of assets may refer to location, quality, or knowledge.

The theory of agency, also used in contract analysis, tackles the issue of designing contracts. Two actors of an agency relationship – principal (employer, superior) and agent (contractor, subordinate) – engage in a partnership whose conditions are laid down in a contract. In an agency relationship, one or more persons, referred to as the principal (P), employ other persons, hereafter referred to as agents (A), to perform a service. It is accepted in the principal–agent model that one of the parties is characterised by holding imperfect information, while the other party holds information important for their mutual well-being. This model assumes that the party which has negotiation and information advantage will offer a contract to the other party. The one who offers a contract is called the principal, whereas the individual who accepts or rejects it becomes the agent. In the basic model, the principal is tasked with designing a remuneration system to motivate the agent to act in the interest of the principal. To formulate such a contract it is necessary to meet two conditions. One is the motivation correctness condition, which means that choosing the optimal effort (from the principal’s point of view) must be no less useful for the agent than choosing any other effort variant. The other is the participation condition, which means that the utility of working for the principal must be at least as high as the utility of working elsewhere [Mas-Collel et al. 1995, Kowalska 2005, after Varian 1990, 2001]. Gorynia [1999] indicated the following six determinants of the emergence of agency problems: diverging interests of P and A, uncertainty, imperfect ability to observe the agent’s behaviour, costs of concluding and performing the contract, incompleteness of the contract, and asymmetry of information between P and A. With regard to the asymmetry of information, Rasmusen [2006] defined five main principal–agent models: moral hazard with hidden action, moral hazard with hidden knowledge/information, adverse selection, signalling, and screening. In each model the principal offers a contract which the agent accepts or refuses.

Game theory presents a different research approach to explaining contracts, relating to the situation of conflict between the parties to the contract under the so-called bargaining problem. Bargaining is treated as a situation of a conflict with at least two participants who have various antagonistic and non-antagonistic goals and abilities to choose available actions. Prisoner’s dilemma is the classic example of a game which is perfectly suitable to model contractual relations. It is a two-player game, in which each player can gain by betraying her opponent, but both will lose if they betray each other. This dilemma is a non-cooperative (partial conflict) non-zero sum game, as the conflict strategy is advantageous compared to the peaceful strategy. One can gain the most by betraying and lose the most by cooperating [Tyc and Schneider 2017].

The research approaches used to explain contracts notwithstanding, various types of contracts are also important. According to authors belonging to various schools of new institutional economy, different traits are crucial in determining the shape of the contract. According to transaction cost theory, transactions are characterised by the following three features: uncertainty, frequency, and specificity of assets. One fundamental division involves complete and incomplete contracts, where the former type does not exist in the real world. In incomplete contracts the asymmetry of information between the parties to a contract is assumed, there is an initial independence of parties, the limited rationality of parties to a contract makes it impossible to provide for all issues related to the rights and obligations of parties, opportunistic behaviour of parties is assumed, as well as the option to renegotiate the conditions of a contract [Stankiewicz 2012]. Therefore, the “incompleteness” of a contract is mostly due to the limited rationality of economic entities and the inability to control some of the
variable circumstances involved in the performance of a contract [Saussier 2000]. Applying the criterion of transaction dimensions, Williamson [1998] distinguishes between classical, neoclassical, and relational contracts (forbearance law). These contracts differ with regard to duration, frequency, personal interactions, prolongation mechanisms, definitions of obligations, etc. The classical contract is used when the dependency between parties is weak or non-existent. Such is the case when the asset specificity level is low, and the ease of finding alternative solutions makes the contract renewable at low cost. The duration of the contract is short, and the price becomes the key variable for coordination and the transfer of rights. A neoclassical contract takes place when the specificity of assets is high enough to form a mutual dependence between parties. The significance of contract duration increases, and the price is no longer a sufficient adjustment factor. The incompleteness of contracts makes the disputes more frequent and difficult to resolve. Relational contracts refer to long-term contracts of high specificity of assets, which creates a high interdependence between parties to a contract, while the risk of opportunism pushes towards integration. The contract is a framework aimed at sustaining the partnership – its essence is the relationship between parties, not the object of the contract. Furubotn and Richter point to marriage and employment contracts as examples of relational contracts [Daniłowska 2007].

SPECIFICITY OF AGRICULTURAL CONTRACTS

The intensification of consolidation processes in agricultural and food processing and in the sector manufacturing the means of production, lead to the increase in importance of contracting in agribusiness. An agricultural contract can be defined as an agreement concluded between a farmer and a buyer, in which the parties undertake to sell and buy a specified amount of goods in the future under fixed principles [Eaton and Shepherd 2001]. Apart from contracting productions, agricultural producers can sell their products on the so-called spot market, where the transfer of resources between individual chain members is coordinated by market (spot) prices. Minot [1986] distinguishes three types of contracts:

- Market-specification contracts, where the buyers secure outlets for agricultural producers, and such information as the quantity and quality of products, delivery dates, and, most importantly, prices are included in the contract.
- Production-management contracts where the contracting party, besides providing outlets for agricultural products, affects the methods of production of contracted goods (used plant protection products, sowing and harvesting dates).
- Resource-providing contracts where the contracting party not only provides outlets for agricultural products but also affects the production methods and provides agricultural producers with such means of production as seeds, fertilizer, or machines.

From these three types, the resource-providing contracts show the highest degree of control over agricultural producers and production. On the other hand, the risk incurred by agricultural producers in this type of contract is the lowest. The price of the product is a very important aspect in the topic of agricultural contracts. Sobańska [2004] defines four contract forms with regard to pricing arrangements: fixed-price contracts with prices which are not subject to any changes; fixed-price contracts with the option to renegotiate prices should economic indicators change; contracts with fixed price ranges which depend on the results achieved by producers; and fixed-price contracts with clauses clearly stipulating that product prices can be renegotiated. Strzębicki [2013] notices that in an economy there are both the stimuli which contribute to contracting agricultural goods and those which do not favour its development. High quality requirements at all stages of the food chain, decreased risk of agricultural production and supplying food processing firms thanks to contracting, internalisation of production, and also the fact that contracting often leads to transferring knowledge from the contracting firm to the agricultural farm, can all be included among the important factors in favour of contracting. Whereas the factors that decrease farmers’ readiness to sign agricultural contracts include direct payments according to cultivation area
and increasing storage capacity in farms. Moreover, there is a threat that large contracting firms may consider contracting as a means to exploit small farmers.

A crucial process taking place in agriculture, and significant to the issue of contracting, is the emergence of producer organisations which then become parties to the contracts concluded with agricultural and food processing companies or retail chains. Studies carried out by Malchar-Michalska [2018] indicate that fixed-price contracts with prices set in advance were predominant among agricultural contracts (71% of studied contracts). In 14% of contracts the motivating component was taken into account, using the “fixed price with a bonus for the quality or timeliness of deliveries”. A vast majority of the studied groups had signed contracts, with the producers of potatoes and milk characterised by the highest proportion of contracts as the form through which produce was transferred to the integrator. Conversely, groups active in the market of fruit and vegetables showed a high share of non-contractual transactions: about 26% of these groups sold their produce outside of contracts. This situation is also highly dependent on the specificity of agricultural raw products, as fruit and vegetables are products which can be more easily sold outside of a contract; what is more, groups have well prepared infrastructure they can use go store produce should it be required. Moreover, there are also informal ties between the groups and recipients in this market, based on many years of cooperation.

Issues relating to agricultural contracts should not be dealt with only in relation to agricultural commodities. Agricultural land, for example, may also be the subject of exchange. Interesting research in this area was carried out by Marks-Bielska [2014], drawing attention to the main factors which influence the sale of agricultural land in Poland. It has been mentioned in the previous section that limited rationality, opportunism, and specificity of assets are the main factors which contribute to generating transaction costs, while signing contracts is a method to reduce these costs. These assumptions need to be reinterpreted with regard to the agricultural sector, and the principles of transaction cost economics also need to be adapted to the needs of the agricultural sector. According to Czternasty and Czyżewski [2007], the assumptions which should be reinterpreted include:

- **Limited rationality** – the assumption of limited rationality seems to be of particular actuality in farming due to the uncertainty and risk of agricultural production, and low flexibility of supply and demand.
- **Opportunism** – in the case of the agricultural sector, opportunism does not flow from the ill will of the parties but from the existence of long production cycles, the uncertainty of results due to the natural conditions, and the unilateral dependence of agriculture on its environment due to the dominance of firms operating in the agricultural environment.
- **Specificity of assets** – in agricultural economics, it is first of all the specificity of location that is significant, physical specificity (of quality), and the specificity of agricultural knowledge, which corresponds to the specificity of human assets.

**CONCLUSIONS**

The article discusses contract theories according to the principles of new institutional economy. Various approaches used in contract analysis were highlighted, such as transaction cost economics, agency theory, and game theory. Transaction costs and contracts were characterized according to various criteria. An important aspect is the identification of factors contributing to the creation of transaction costs and the need to reinterpret them with regard to the agricultural sector. Agricultural contracts with their unique specificity were given particular attention. In the present-day economic situation, further development of contracting processes in agriculture is inevitable, as it provides certain benefits to both sides of the conflict. From the perspective of food industry enterprises, signing contracts, in particular resource-providing contracts or production-management contracts, gives them control over the production process, thus allowing them to ensure the appropriate quality of goods and continuity of supply. For agricultural producers, signing a contract is a means to reduce market risks and ensure outlets for the agricultural products they have produced. Another problem in the agricultural problem is the asymmetry between agricultural producers and food...
processing enterprises which may contribute to the use of strength to affect the contracts being signed, making them less beneficial for agricultural producers. In spite of this fact, the author believes that the question of contracting on a larger scale should be considered again in Polish agriculture.

REFERENCES


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STRESZCZENIE

W artykule dokonano przeglądu polskiej i zagranicznej literatury ekonomicznej dotyczącej nowej ekonomii instytucjonalnej (NIE) i różnych podejść badawczych wykorzystywanych w jej ramach. Szczególną uwagę zwrócono na ekonomiczną teorię kontraktów oraz ekonomikę kosztów transakcyjnych, gdyż to właśnie ograniczenie kosztów transakcyjnych jest głównym bodźcem skłaniającym do podpisywania kontraktów. Istotną część pracy stanowią rozważania dotyczące kontraktów rolnych i ich specyfiki. W artykule omówiono różne teorie mające zastosowanie w analizie kontraktów, scharakteryzowano kontrakty według różnych kryteriów, a także zwrócono uwagę na znaczenie kosztów transakcyjnych w teorii kontraktów. Ponadto zidentyfikowano czynniki, które przyczyniają się do powstawania tych kosztów, wskazując na konieczność adaptacji założeń ekonomiki kosztów transakcyjnych dla potrzeb sektora rolnego.

Słowa kluczowe: nowa ekonomia instytucjonalna, kontrakty, kontrakty w rolnictwie, koszty transakcyjne