

UTILITARIAN AND COGNITIVE VALUES OF THE INTER-ORGANIZATIONAL SYNERGISTIC EFFECT. CASE STUDY¹

Introduction

It is commonly stated in the literature on strategic management that the increase of effectiveness is an important, though not the only prerequisite for creating inter-organizational relationships². Determining whether an inter-organizational relationship actually contributes to increased effectiveness, requires periodic assessment of interaction. The results obtained form the basis for any adjustment of its terms. One of the criteria for assessing the effectiveness of inter-organizational relationships³ of an enterprise may be the surplus of benefits – measured in units of cost or outcome – attributable to the company as part of mutual exchange. Such surplus could not be achieved if the company operated separately and independently, since it can be achieved only through co-operation. In light of the literature, positive assessment of the inter-organizational relationship of a company provides a basis for strengthening

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² W. Czakon, *Wzrost efektywności jako przesłanka tworzenia więzi międzyorganizacyjnych*, in: H. Jagoda, J. Lichtarski (ed.), *Nowe kierunki w zarządzaniu przedsiębiorstwem – celowość, skuteczność, efektywność*, Wydawnictwo Akademii Ekonomicznej im. Oskara Langego we Wrocławiu, Wrocław 2006, p. 244.

³ Inter-organizational relationships mean such interaction between enterprises, in which there is exchange of material, energy and information, plus, the parties manifest their commitment of the exchange, and this attitude is mutual. These relationships are a specific phenomenon, defined in terms of time, place and two-way flow of material, energy and information. See W. Czakon, *Istota relacji sieciowych przedsiębiorstwa*, „Przegląd Organizacji” 2005, No. 9, pp. 10–13.

the current trajectory of its development⁴. Negative assessment, though, usually leads to modification or degradation of this relationship⁵.

The main objective of this paper is an attempt to identify the differential effect of inter-organizational synergy⁶ as a synthetic measure of the effectiveness of non-market and non-hierarchical business relationships. Apart from that, we try to indicate types of relationships of the enterprise with its main supplier and the main customer⁷. Due to the dichotomy of non-hierarchical and non-market business relationships, in the case study there has been used the set of features proposed by W. Czakon to establish the type of relationships of an enterprise with its external partners⁸.

Therefore, the article contributes to the current search for answers to the question whether the inter-organizational relationships of a company, perceived as more stable and secure, remain a more effective form of exchange management as compared to normal market relations (arm's-length market relationships). Inter-organizational relationships are inherent to contribute to increasing a company's effectiveness or to improving its competitive position⁹. Thus, the issue discussed here is part of the relational approach to building a competitive advantage¹⁰, since the object of this approach are all relationships of the company with the business environment¹¹.

The case study is an attempt to confirm the usefulness of the differential effect of inter-organizational synergy as a measure of assessment of non-market and non-hierarchical business relationships. Attention has been paid to identifying types and assessing effects of relationships of the presented manufacturing company with its main supplier and the main customer. The studied manufacturing company has been consciously chosen, provided the possibility to gain the insight which other organizations do not allow¹².

⁴ D. Levinthal, J. Myatt, *Co-Evolution of Capabilities and Industry: The Evolution of Mutual Fund Processing*, „Strategic Management Journal” 1994, Vol. 15, Special Issue, pp. 45–62.

⁵ R. Kumar, K. Nti, *Differential Learning and Interaction in Alliances Dynamics: A Process and Outcome Discrepancy Model*, „Organization Science” 1998, Vol. 9, No. 3, pp. 356–367.

⁶ The differential effect of inter-organizational synergy is synonymous with the inter-organizational synergistic effect.

⁷ The term “customer” used in the paper is the antonym of the term “supplier”. See R. Baran, *Sila przetargowa przedsiębiorstwa a efektywność jego działalności marketingowej*, Oficyna Wydawnicza SGH, Warszawa 2009, pp. 86.

⁸ W. Czakon, *Istota...*, op.cit., pp. 11–13; idem, *Więzi sieciowe a więzi rekurencyjne przedsiębiorstwa*, in: J. Pyka (ed.), *Współczesne koncepcje i metody zarządzania przedsiębiorstwami*, TNOiK, Katowice 2005, pp. 429–437.

⁹ W. Czakon, *Wzrost...*, op.cit., pp. 244.

¹⁰ J.H. Dyer, H. Singh, *The Relational View: Cooperative Strategy and Sources of Interorganizational Competitive Advantage*, „Academy of Management Review” 1998, Vol. 23, No. 4, pp. 660–679.

¹¹ W. Czakon, *Ku systemowej teorii przewagi konkurencyjnej przedsiębiorstwa*, „Przegląd Organizacji” 2005, No. 5, pp. 5–8.

¹² M. Bratnicki, *Rozważania o stosowaniu studium przypadków w badaniach przedsiębiorczości*, „Przegląd Organizacji” 2007, No. 9, pp. 8–10.

This study is focused on the diagnostic procedure and has been written from the synergist position.

1. Types of exchange management of a company with the environment

The characteristics of two polar forms for governing transactions, i.e. market-based discrete contracts and hierarchy, have been the focus of intense scholarly interest by strategic management and organizational theorists¹³. A very brief review of these characteristics is instructive because they provide the basis for exploring alternative frameworks for governing transactions.

Markets have three main functions: matching buyers and sellers; facilitating effective exchange of information, goods, services and payments associated with market transactions; providing an institutional infrastructure, such as a legal and regulatory framework that enables the market to function effectively¹⁴. Operational effectiveness means that market participants are able to carry out transactions at a competitive cost, while informational effectiveness means that all available information is incorporated into the price. The degree of informational and operational effectiveness determines the extent to which markets are allocation ally effective¹⁵.

From the viewpoint of mechanisms governing transactional processes, P.S. Ring and A.H. van de Ven proved the existence of four types of exchange management (transactions): the market, hierarchical, recursive and relational ones (see Table 1).

Market-based transactions can be simply characterized as discrete contracts: relatively short-term, bargaining relationships between highly autonomous buyers and sellers designed to facilitate an economically effective transfer of property rights¹⁶. In a situation where short-term contracting, based on market mechanism, proves relatively more expensive, the company can expand the internal coordination mechanisms (hierarchies as management mechanisms)¹⁷, or select one of the intermediate types of exchange management. Where transactions have highly uncertain outcomes, recur frequently and require unique or transaction-specific investments, they can be

¹³ P.S. Ring, A.H. Van de Ven, *Structuring Cooperative Relationships between Organizations*, "Strategic Management Journal" 1992, Vol. 13, No. 7, pp. 483–498.

¹⁴ J.Y. Bakos, *Reducing Buyer Search Costs: Implications for Electronic Marketplaces*, "Management Science" 1997, Vol. 43, No. 12, pp. 1676–1692.

¹⁵ A.R. Montazemi, J.J. Siam, A. Esfahanipour, *Effect of Network Relations on the Adoption of Electronic Trading Systems*, "Journal of Management Information Systems" 2008, Vol. 25, No. 1, pp. 233–266.

¹⁶ P.S. Ring, A. H. van de Ven, *Structuring...*, op.cit., pp. 483–498.

¹⁷ J. Niemczyk, *Struktury układu outsourcingowego*, in: R. Krupski (ed.), *Zarządzanie strategiczne. koncepcje – metody*, Wydawnictwo Akademii Ekonomicznej im. Oskara Langego we Wrocławiu, Wrocław 2007, p. 390.

Table 1. Distinguishing characteristics of transaction types

Distinguishing characteristics	Forms				
	1	2	3	4	5
Nature of exchange	On-going production and rationing of wealth subordinate obeys or quits the employment relationship	One-time transfer of property rights	Episodic production and transfer of property rights	Sustained production and transfer of property rights	
Terms of exchange	Authority structure superior hires	Clear, complete and monetized, sharp in by agreement, sharp out by pay and performance	Certain, complete contingent on prior performance; plans for experimentation on safeguards	Uncertain, open and incomplete; plans for bilateral learning safeguards and conflict resolution	
Transaction-specific investment	Idiosyncratic	Nonspecific	Mixed	Mixed and idiosyncratic	
Temporal duration of the transaction	Indefinite	Simultaneous Exchange	Short to moderate term	Moderate to long term	
Status of the parties	Structural functional command-obedience role relationship between legally unequal parties	Limited, nonunique relation between legally equal and free parties	Unlimited, unique relation between legally free and equal parties	Extensive, unique social-em bedded relation between legally equal, and free parties	
Mechanisms for dispute resolution	Internal conflict resolution by fiat and authority	External market norms and societal legal system	Norms of equity and of reciprocity and societal legal systems	Endogenous designed by the parties and based on trust	
Relevant contract law and management structure	Employment contract unified management	Classical contract market management	Neoclassical contract market management	Relational contracts bilateral management	

Source: P.S. Ring, A.H. van de Ven, *Structuring Cooperative Relationships between Organizations*, "Strategic Management Journal" 1992, Vol. 13, No. 7, pp. 483–498.

performed most effectively within hierarchies. When a conflict arises, it is resolved by resort to the authority or fiat that is embedded in the asymmetrical command and obedience roles relationships that are characteristic of hierarchy. In these unified management structures, the employment contract is the relevant legal form of management.

Intermediate solutions, i.e. those located between the use of the market as a source of resources and the internalization of everything inside the company¹⁸, refer to the recursive and relational types of exchange management.

Neoclassical contracting is associated with the tripartite manner of exchange management, and applies to both mixed and idiosyncratic assets exchanged occasionally. This type of contracting refers to medium and long term transactions. Relational contracting, though, is related to a bilateral or unified manner of exchange management¹⁹.

It is worth noting that recursive and relational contracting is incomplete. First of all, not all events that require adaptation can be foreseen in advance. Secondly, the actual effects of adaptation in relation to many unexpected events will not be evident until they materialize. However, in contrast to the neoclassical system, in which the reference point of adaptation is the original agreement, the reference point in the truly relational approach is the “whole relationship in its development over time. This may or may not include the original agreement”²⁰.

Recurrent exchanges by their very nature are different from discrete market based exchanges. While discrete exchanges are characterized by very limited communication and narrow content where the identity of the parties to a transaction is ignored, recurrent exchanges transpire over time with each transaction viewed in terms of its history and its anticipated future²¹. Recurrent contracting enables the parties to build trust, by demonstrating norms of equity and reciprocity²². Recurrent contracts involve repeated exchanges of assets that have moderate degrees of transaction specificity. The terms of these exchanges tend to be certain, but some contingencies may be left to future resolution. Temporally, the duration of these contracts is relatively short-term. The parties see themselves as autonomous, legally equal, but contemplating a more embedded relationship. They use the recurrent contracting

¹⁸ J. Niemczyk, *Wyróżniki, budowa i zachowania strategiczne układów outsourcingowych*, Wydawnictwo Akademii Ekonomicznej im. Oskara Langego we Wrocławiu, Wrocław 2007, p. 40.

¹⁹ J. Lichtarski (ed.), *Podstawy nauki o przedsiębiorstwie*, Wydawnictwo Akademii Ekonomicznej im. Oskara Langego we Wrocławiu, Wrocław 2007, p. 47.

²⁰ O.E. Williamson, *Ekonomiczne instytucje kapitalizmu*, Wydawnictwo Naukowe PWN, Warszawa 1998, p. 83.

²¹ P.S. Aulakh, F.E. Gençtürk, *Contract Formalization and Governance of Exporter – Importer Relationships*, “Journal of Management Studies” 2008, Vol. 45, No. 3, pp. 457–479.

²² B.C. Bichescu, M.J. Fry, G.G. Polak, *Workload Balancing Through Recurrent Subcontracting*, “Production and Operations Management” 2009, Vol. 18, No. 1, pp. 33–47.

to explore outcomes driven by motives other than effectiveness, to experiment with safeguards, and with alternative methods for resolving conflict²³. In contrast, relational contracts tend to involve long-term investments that stem from groundwork laid by recurrent bargaining on the production and transfer of property rights among these legally equal and autonomous parties²⁴.

Thus, while analysing a single relationship of an inter-organizational exchange, one needs to take into account that the company can take one of two non-market and non-hierarchical forms, i.e. recursive or relational relationships. According to W. Czakon, the characteristics allowing to distinguish between these types of relationships can be divided into three groups (see Table 2).

Table 2. Elements of the assessment of relational and recursive relationships of the company

Characteristics of inter-organizational relationships of the company	Description of attributes (characteristics) of recursive and relational relationships
Exchange	It refers to the object of a relationship, taking into account the material, energy ²⁵ , information flows. Given this attribute (characteristic), relational relationships are a structure of the business relationships through which information, material and energy exchange takes place. Relational relationships do not differ from recursive relationships in terms of relation content. The content relates to the relationship object, including exchange of goods and information, agreeing actions and its scope and duration (including frequency). Frequency can be measured by the number of contacts or the amount of time spent on these contacts. The typology of exchange focuses on material and energy flows. In this reflection, there is no reference to the exchange of information, yet there is broad literature on the information dimension of network flows. It states, inter alia, that companies have different access to information depending on their social network, yet the cost of access to information is not an important factor. The structure of information relationships is essential in business. Doing business and non-work activities are linked through the spread of opinions on persons engaged in business. Hence, the network of social information flows determines the success of the company on the market.

²³ P.S. Ring, A. H. van de Ven, *Structuring...*, op.cit., pp. 483–498.

²⁴ Ibidem.

²⁵ Energetism prefers the principle of the maximum use of every form of energy. The overall incidence of various forms of energy (e.g. physical and psychological) causes the qualitative hierarchy of beings. See H. Piekarczyk, *Efekt organizacyjny jako kryterium oceny systemu wytwórczego*, „Zeszyty Naukowe Akademii Ekonomicznej w Krakowie” 1991, No. 102, p. 15.

Commitment	It involves deepening and widening of existing exchange relationships. It refers to bearing expenditures which are not necessary for the transaction of market exchange and its enrichment. Multidimensionality of commitment makes it easier to distinguish the relational relationship from the recursive one. Both types are manifested in operational engagement, i.e. repetitive transactions in a relatively long time. The difference between both types of relationships is based mainly on the account of social embedding in relational relationships. Social embedding does not exist practically in recursive relationships. In addition, the investment commitment in a relationship is an exclusive feature of relational relationships. These are among others: location of production facilities in the vicinity of the customer's plant, implementation of the same quality standards and systems of information, joint training of staff. Thus, multidimensional commitment distinguishes recursive relationships from relational ones. Commitment is a measurable, gradual and relative characteristic.
Reciprocity	It takes into account the importance of reciprocate commitment and exchange, but also is associated with the community of goals. Reciprocity goes beyond unilateral action, symmetrical to partner's behaviour. Thus, it goes far beyond sale/purchase transactions. It includes exchanging information and joint, coordinated decision making. It is not enough, for example, that the supplier made some investments in order to adapt the production line to meet specific requirements of key co-operator. Co-operator should reciprocate the investments recurred by the supplier, devoting part of their resources (tangible or intangible) for the development of relations with the supplier.

Source: W. Czakon, *Istota relacji sieciowych przedsiębiorstwa*, „Przegląd Organizacji” 2005, No. 9, pp. 11–13; idem, *Więzi sieciowe a więzi rekurencyjne przedsiębiorstwa*, in: J. Pyka (ed.), *Współczesne koncepcje i metody zarządzania przedsiębiorstwami*, TNOiK, Katowice 2005, pp. 433–434; R.G. Eccles, D.B. Crane, *Managing Through Networks*, „California Management Review” 1987, Vol. 30, No. 1, pp. 176–195; S.P. Borgatti, R. Cross, *A Relational View of Information Seeking and Learning in Social Networks*, „Management Science” 2003, Vol. 49, No. 4, pp. 432–445; W. Czakon, *Dynamika więzi międzyorganizacyjnych przedsiębiorstwa*, Wydawnictwo Akademii Ekonomicznej im. Karola Adamieckiego w Katowicach, Katowice 2007, pp. 45; M. Mitrega, *Zdolność sieciowa jako czynnik przewagi konkurencyjnej na rynku przedsiębiorstw*, Wydawnictwo Akademii Ekonomicznej im. Karola Adamieckiego w Katowicach, Katowice 2010, p. 54.

The characteristics indicated in Table 1 and the values of these relationships can be used for a dichotomous division of non-hierarchical and non-market relationships of a company, i.e.:

- *relational relationships* – interactions that occur between companies in which there is exchange of information, materials or energy, parties manifest their commitment and this attitude is mutual,
- *recursive relationships* – interactions that occur between companies in which reciprocity does not occur or takes very low values despite operational commitment, which means asymmetric information, social and investment engagement²⁶.

²⁶ See W. Czakon, *Więzi...*, op.cit., p. 434; P.S. Ring, A.H. van de Ven, op.cit., pp. 483–498.

The specified characteristics will be later used to identify the type of inter-organizational relationship in practice (the empirical part).

By building non-market and non-hierarchical relationships, companies seek to reduce costs of recurrent transactions²⁷. In this case, the benefits for the company result from the reduction of costs of exchange with external partners and thus may be the measure of effects of recursive and relational relationships.

2. The concept and assessment measure of effectiveness of a company's relationships with external partners

As pointed out by E. Gummesson, relationships of a company with the environment due to the subjective criterion²⁸ can be divided into classic market relationships, i.e. bilateral ones: supplier – customer, which are examined in this study. Since the supplier and customer are participants of the exchange relationship, we shall use the term “external partners”.

Effectiveness belongs to the category of ambiguous terms. The concept is constituted by performance criteria and evaluation ranges, i.e. the range of consequences of the actions taken²⁹.

Efficiency is thus also a feature of the actions resulting in the positively assessed outcome regardless of whether it was intentional. Performance can be assessed as effective, even if the results gained are inconsistent with the planned ones, if only it will bring positive effects due to the needs of the moment³⁰. The criteria for assessing the effectiveness are such features of the objects subjected to these actions, characterizing their structure, functioning, inputs and outputs, which are influenced by actions, i.e. which are effects, and due to which these activities are assessed³¹.

Effectiveness can be reduced to activities related to cost reduction³². Hence, the assessment of effectiveness of business relationships with external partners (in this paper: suppliers and customers) may be made by measuring the reduction

²⁷ W. Czakon, *Dynamika więzi międzyorganizacyjnych przedsiębiorstwa*, Wydawnictwo Akademii Ekonomicznej im. Karola Adamieckiego w Katowicach, Katowice 2007, p. 113.

²⁸ E. Gummesson, *Total Relationship Marketing. Rethinking Marketing Management: From 4Ps to 30Rs*, Butterworth-Heinemann, Oxford 2000, pp. 19–23, based on: M. Mitrega, *Marketing relacji*, Wydawnictwa Fachowe CeDeWu.pl, Warszawa 2005, p. 83.

²⁹ J. Lichtarski, *Kryteria i metody oceny efektywności przedsięwzięć organizatorskich w przedsiębiorstwie*, Wydawnictwo Akademii Ekonomicznej im. Oskara Langego we Wrocławiu, Wrocław 1982, p. 26.

³⁰ S. Nowosielski, *Skuteczność i efektywność realizacji procesów gospodarczych*, in: T. Dudycz (ed.), *Mikroekonomiczne aspekty funkcjonowania przedsiębiorstw*, Wydawnictwo Politechniki Wrocławskiej, Wrocław 2008, p. 40.

³¹ J. Lichtarski, *Kryteria...*, op.cit., p. 26.

³² S. Nowosielski, *Skuteczność...*, op.cit., p. 41.

of preparation costs, execution and settlement of exchange³³. Expected benefits from the reduction in exchange costs are one of the reasons for creating and developing inter-organizational relationships. The anticipated increase in costs of exchange with external partners, compared with those borne by the company making the exchange on the basis of purely market conditions, will usually cause refraining from establishing relationships or modifying them, and ultimately – leaving such a system.

The concept of the inter-organizational effect refers in its fundamental meaning to non-market and non-hierarchical types of the exchange management between at least two companies. It is also used to single-subject actions, i.e. in a situation where a company carries out the exchange of products or services outside the cooperative systems (market type of management). These types of management allow therefore to identify:

- *the effect of the inter-organizational collective action,*
- *the effect of the inter-organizational individual action.*

The effect of the inter-organizational collective action (e.i.c.a.) refers to total benefits, measured in the units of cost or outcome, attributable to the company as a participant of the exchange, which it could not achieve, if it operated separately and independently, and which are achievable only through the relationship of co-operation. The measure of this form of *e.i.c.a.* are:

- for customers – the cost of a complete set of activities related to a specific customer within the cooperative system,
- for suppliers – the cost of a complete set of activities related to a specific supplier in the cooperative system plus the value of the purchased products/services according to the purchase prices used within the relationship with the supplier.

The identification of effects of the assessed company-supplier/customer relationship meets the condition of selection criteria objectification.

The effect of the inter-organizational individual action (e.i.i.a.) refers to total benefits measured in the units of cost or outcome, attributable to the company as a participant of the mutual exchange, which it could not achieve, if it operated separately and independently, i.e. outside the cooperative systems. The measures of this form of *e.i.i.a.* are:

- for customers – the cost of a complete set of activities related to a specific customer, if the company operated outside the cooperative system,
- for suppliers – the cost of a complete set of activities related to a specific supplier plus the value of products/services according to the purchase prices used within the relationship with the supplier.

³³ W. Czakon, *Dynamika...*, op.cit., p. 115.

Presented measures, as in the case of *e.i.c.a.*, meet the condition of selection criteria objectification and thus provide a complete, reliable and systematic picture of the business relationships with external partners.

For the exchange on preferential terms and for the reference system, i.e. the exchange based on purely market conditions, we calculate the value of exchange costs. Then, we calculate the difference between *the effect of the inter-organizational collective action* and *the effect of the inter-organizational individual action*, expressed in the form of costs. In practice, the result of such a comparison gives an answer to the question what is the differential effect expressed in amount or percentage, indicating the existence of synergy, asynergy or dis-synergy.

The differential effect of inter-organizational synergy (d.e.i.s.) refers to the surplus of benefits measured in the units of costs or outcome, attributable to the company as a participant in the mutual exchange, which it could not achieve, if it operated separately and independently, and which is achievable only through relations of cooperation. The measure of *d.e.i.s.* is the reduction of the exchange cost fixed for the relationship with the diagnosed external partner (in this paper: main supplier and main customer).

The notion of *the differential effect of inter-organizational synergy* is always valued positively. It is opposed to dis-synergy, meaning the state of dysfunction of interaction.

Obtaining the differential effect of inter-organizational synergy requires the development of the relationship from the purely market level to the level of inter-organizational relationship.

The synergy effect is dual: firstly, it is determined in the field of system solutions, secondly, it is the differential effect of synergy, which is calculated according to the adopted reference system³⁴. The reference system for non-market and non-hierarchical types of the economic exchange management is the community of unrelated companies. It is therefore a whole which consists of companies independent in organizational and legal terms, or which have no formal inter-organizational relationships.

It is worth noting that the choice of the reference system determines the result of synergetic comparisons. This means that they are relativized to a reference system, since the synergistic “difference” depends on what system is adopted³⁵ as the basis of comparison for non-market and non-hierarchical types of exchange management.

Inter-organizational relationships are always two-way, i.e. they take place in pairs (diads) of companies. This means that these relationships apply to both the specific

³⁴ H. Piekarz, *Efekt organizacyjny jako kryterium oceny systemu wytwórczego*, Wydawnictwo Akademii Ekonomicznej w Krakowie, Kraków 1991, pp. 23–25.

³⁵ Ibidem, pp. 25–26.

actions taken by two companies relatively to each other as well as opinions, knowledge and emotions that employees of one company relate to the second one – and vice versa.

Parties in the relationship must seek to exchange information, material or energy. This does not mean that this exchange must always be formalized as sale/purchase transactions in legal and accounting sense. It can also take the form of a barter exchange of services³⁶.

3. Case study – identification of types of exchange management characteristics and a sample application of the differential synergy effect as a synthetic measure of assessment of business relationships with specific external partners

The empirical material used in this part of the paper has been obtained as a result of two interviews with a manager of a manufacturing company. The first one was informal, similar to a natural conversation and aimed at obtaining information initially identifying the company's exchange management with external partners. During this interview, it was found that there are no capital relationships between the manufacturing company and its counterparts.

Empirical confirmation of the existence of non-hierarchical and non-capital³⁷ relationship with the main supplier and the main customer was the basis for another interview – this time using a questionnaire – aimed at identifying the type of exchange management and assessing the effectiveness of these two specific inter-organizational relationships. Both interviews were conducted in June 2011.

The research subject are two specific relationships of the manufacturing company operating in the manufacturing industry – manufacture of products for construction (in particular: PVC windows and doors, aluminium joinery, external and internal windowsills): with *the supplier of window and door profiles* and with *the customer of windows and doors*. The content of these relationships was the exchange of products or services supported by formal purchase/sale transactions in the legal and accounting sense.

The manufacturing company has been consciously chosen, based on the possibility to gain insight, which other organizations do not give. This company is organized in the form of general partnership and was founded in 1999. In the first years of

³⁶ M. Mitreęa, *Zdolność sieciowa jako czynnik przewagi konkurencyjnej na rynku przedsiębiorstw*, Wydawnictwo Akademii Ekonomicznej im. Karola Adamieckiego w Katowicach, Katowice 2010, pp. 69–70.

³⁷ Where there are capital relationships, there is also the hierarchy of command. See more in: M. Trocki, *Outsourcing*, PWE, Warszawa 2001, pp. 28–32.

activity, it employed only a few people. Currently, it employs about 50 people. The development of the company consists in systematically implemented product and process innovations. In principal, these were largely adaptations of existing technologies (technical innovation) concerning the design of the products and technologies for their production. Process innovations are focused on the customer's service results and the efforts to provide comprehensive service to retail and institutional customers.

In 2010, the company obtained the Certificate of Stability 2009, awarded by an international business intelligence company Dun & Bradstreet Poland, which assesses the credibility and stability of the company based on the analysis of payment morality as well as the analysis of financial indicators in the latest available financial statements³⁸.

3.1. Identification of the type of relationship with specific external partners

An identification of the characteristics of business relationships with the main supplier and the main customer which allowed us to extract actual types of exchange management is shown in Table 3.

Table 3. Scope of material, energy and information flows within specific relationships

	Characteristics	Relationship with the supplier	Relationship with the customer
exchange	material	Yes	yes
	energetic	Yes	yes
	information	Yes	yes

Source: the author's own work.

The object of the study were actual material, energy and information flows that could be observed between the company and its external partners.

The subject of relationships with the supplier was primarily the purchase of window profiles of the highest technical parameters commercially available. Between these companies, there is an exchange of information relating to price, quantity and quality of the object of exchange, as well as the timing and terms of delivery, confirmation of orders, transportation, cargo insurance, place of delivery unloading, the individuals responsible for receiving deliveries, terms of trade credit, handling returns and shortages, clearing settlements with the supplier. In addition, the supplier

³⁸ On the basis of the certificate of business assurance by Dun & Bradstreet Poland, acquired by the analysed company.

informed the company in advance about new products. Extensive exchange of information concerned the information considered useful in business.

The object of the relationship between the analysed company and its main customer was the sale of PVC windows and doors, aluminium joinery and external and internal windowsills. The exchange of information focused mainly on technical parameters of products subject to sale and purchase transactions as well as on conditions of this exchange, namely: storage, transportation, assembly, handling returns and shortages, security against the risk of recipient's insolvency, confirmation of charges, monitoring payments by customers, invoice correction.

In terms of exchange value, the main customer of the analysed manufacturing company is a large company performing works related to construction of residential and non-residential buildings on Polish territory. The object of this relationship is the supply of windows manufactured in accordance with the specifications given by the partner – sometimes along with their installation. Information flows within this relationship allow the partners to reduce the time necessary to match their offers to the needs in terms of price and turnaround. Furthermore, there is no need to make additional measurements of window and door openings. The frequency of exchange depends on the number of orders from the customer. The relationship maintained with the construction company allows the customer to set a unit price of windows as a vital element of the close bid.

The construction company co-operates with this manufacturer of windows, because it meets the investors' requirements, even those atypical, in terms of size, shape and parameters of thermal transmittance of windows.

The customer provides the company with the information on the expected increase/decrease in demand for their products in connection with the planned execution of works. An important consequence of relationships with the customer is also joint exhibition. The customer does not only buy products manufactured by the analysed company, but also has the possibility of their transportation and installation. The solution addressed to corporate customers is the coordination of works related to the installation of windows, doors and other complementary products at the customer's place. As part of comprehensive investment service, it is important to ensure the preparation of openings (gateways, interior doors) as far as the width and height of frames are concerned. In order to eliminate errors after finishing the work, the company offers, under the contract, the oversight of correct preparation of openings and installation performed by specialized groups, certified by such producers as Porta, Gerda, Brüggmann or Reynaers. Thus, the customer does not have to waste time to coordinate such an order with various companies.

Both relationships of the company, i.e. the one with the supplier and the one with the customer, are characterized by stable cooperation, lasting for nearly ten years. The volume of transactions with these external partners is very significant

in comparison to other contractors. This implies a high degree of operational commitment of these entities.

The relationships between the partners are secured by formal contracts protecting them against opportunistic behaviour of any partner. This applies to situations in which one of them would like to increase their profits at the expense of the other. The results of empirical studies show that long-lasting relationships do not exempt from formal contracts³⁹.

The diagnosis of the degree of the companies' commitment in the relationship and of its reciprocity as successive values of the characteristics determining the type of relationship with the supplier and with the customer are shown in Table 4. By examining the intensity of the occurrence of factors leading the company to strengthen its inter-organizational relationships, we can identify four dimensions of the company's commitment in the relationship, as well as verify the degree of reciprocation of its partner's efforts. Reciprocity is the key element of the assessment made by its parties⁴⁰. Such an assessment is part of building, verifying, modifying or quitting the relationship.

The scales of measuring the degree of effort reciprocation (reciprocity) of external partners within the relationship have been constructed based on the concept of relative perceptual performance⁴¹. It is based on the respondents' subjective assessment of the efforts put into the relationship by external partners.

In light of the results of measuring the characteristics of the relationship with the supplier, we have established that this was a recursive relationship. The following elements speak for this: high operational commitment, average level of information commitment, low social commitment and lack of any investment on the part of the analysed production company.

In the case of co-operation with the customer, the recorded high level of operational commitment and slightly higher than before level of information commitment with minimal social commitment and total lack of investment commitment on both sides also speak for recognizing this relationship as a recursive one.

It is worth noting that the partners' commitment within the relationship affects the effectiveness of coordination of the company's activities with external partners, thus, making it an important source of competitive advantage⁴². That is why one can observe a lot of interest on the part of business practice in the criteria for assessing the effectiveness of inter-organizational business relationships.

³⁹ R.F. Lusch, J.R. Brown, *Interdependency, Contracting, and Relational Behaviour in Marketing Channels*, "Journal of Marketing" 1996, Vol. 60, No. 4, pp. 19–38.

⁴⁰ P.S. Ring, A. H. van de Ven, *Developmental Process of Cooperative Interorganizational Relationships*, "Academy of Management Review" 1994, Vol. 19, No. 1, pp. 90–118.

⁴¹ K. Fonfara, *Rynkowa orientacja polskich przedsiębiorstw*, „Marketing i Rynek” 2001, No. 12, pp. 19–26.

⁴² J.H. Dyer, H. Singh, *op.cit.*, pp. 660–679.

Table 4. Degree of partners' commitment and reciprocity within the inter-organizational relationship

Characteristics*		The measuring tool used ⁴³	Value of characteristics of relationship with supplier	Value of characteristics of relationship with customer
commitment	operational	scale and scope of discharging by the analysed company with formal and informal terms of the contract	4	4
	information	intensity of sharing information about goals and means of achieving these goals with the specific external partner	3	4
	Social	intensity of direct meetings with the specific external partner initiated by the company at a specified date	1	1
	investment	investment in co-specialized resources made by the analysed company	0	0
reciprocity	operational	scale and scope of discharging by the specific external partner with formal and informal terms of the contract	2	3
	information	intensity of sharing information about goals and means of achieving these goals with the analysed company	3	4
	Social	intensity of direct meetings initiated by external partners at a specified date	1	1
	investment	investment in co-specialized resources made by external partners	0	0

* The point of reference in the assessment of commitment and reciprocity of non-market and non-hierarchical inter-organizational business relationships are the values of specified characteristics in the situation where the exchange would take place in purely market conditions.

Weighting scale: 1 – very small, 5 – very large, 0 – does not exist.

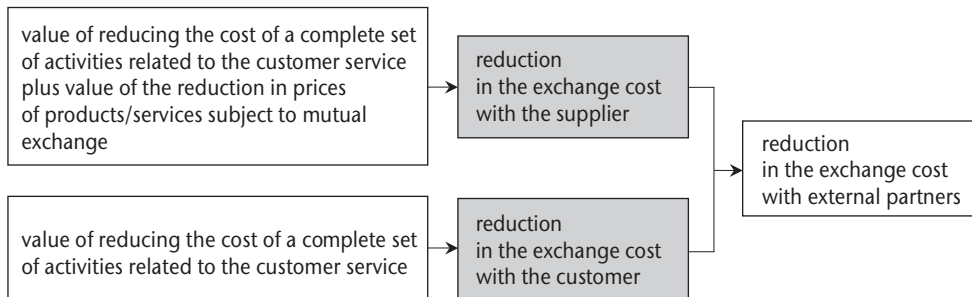
Source: see Table 1⁴³.

⁴³ The content of indicators used in the paper to assess the characteristics of relationships is based on: J.H. Dyer, *Effective Interfirm Cooperation: How Firms Minimize Transaction Costs and Maximize Transaction Value*, „Strategic Management Journal” 1997, Vol. 18, No. 7, pp. 535–556.

3.2. Application of the differential synergy effect as a synthetic measure of the assessment of inter-organizational business relationships

The graphical presentation of the concept of measuring the effectiveness of inter-organizational business relationships, judged by the reduction in the exchange cost with the specific external partner, has been given in Figure 1.

Figure 1. The concept of measuring the effectiveness of inter-organizational business relationships due to the type of market relationships



Source: author's own work.

Co-operation with external partners reduces the exchange cost for each party. It is known that in terms of partners' reciprocity and commitment the costs of coordination and protection against uncertainty and opportunistic behaviour of partners are reduced⁴⁴. The synergistic effect is sought not only inside the company⁴⁵, but also in the inter-organizational area. All inter-organizational business relationships form a space of interaction of relatively independent companies⁴⁶.

In this part of the study *the differential effect of inter-organizational synergy* (or in other words, *inter-organizational synergistic effect*) is expressed in terms of benefits from the reduction of costs of exchange with specific external partners. In practice, after having determined the differential effect of the inter-organizational synergy, expressed in amount or percentage, respondents made a transformation of this value

⁴⁴ J. Child, D. Faulkner, *Strategies of Co-Operation. Managing Alliances, Networks, and Joint Ventures*, Oxford University Press, Oxford 1998, pp. 21, based on: W. Czakon, *Dynamika...*, op.cit., p. 98.

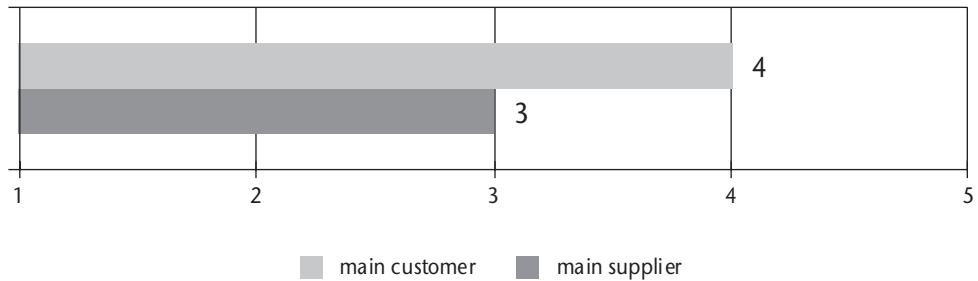
⁴⁵ See among others: H. Piekarczyk, *Efekt złożony jako podstawa pomiaru stopnia zorganizowania*, „Zeszyty Naukowe Akademii Ekonomicznej w Krakowie – Prace z zakresu organizacji i zarządzania” 1988, No. 278, pp. 5–28; C. Suszyński, *Synergia w działalności rynkowej przedsiębiorstwa*, Oficyna Wydawnicza SGH, Warszawa 1992.

⁴⁶ W. Czakon, *Dynamika...*, op.cit., pp. 38, 92.

into points, indicating the level of benefits from the reduction of costs of exchange with the main supplier and main customer.

Figure 2 shows the *differential effect of inter-organizational synergy (d.e.i.s.)* calculated for these partners, measured in terms of reduction of exchange costs.

Figure 2. Assessment of the effectiveness of recursive relationships of the company



Scale of weights: 1 – very small benefits from the reduction of exchange costs, 5 – very large benefits from the reduction of exchange costs.

Source: see Figure 1.

Recursive relationships with the main customer and the main supplier proved to be a more effective (additional benefits) tool for the exchange of products or services than in the case of relatively independent activities.

The results (see Figure 2) indicate that in the case of the relationship with the supplier, the *inter-organizational synergistic effect of collective action* has been evaluated more than moderately higher than the base effect. In the case of the relationship with the customer, the *inter-organizational synergistic effect* has been evaluated much higher than the base effect.

On the one hand, the *differential effect of inter-organizational synergy* fulfilled its role of a synthetic measure or assessment of the inter-organizational relationships of the company aggregating subcriteria and can be a useful tool for measuring the effectiveness of non-hierarchical and non-market relationships used in the research. On the other hand, the company participating in the variety of cooperative agreements should not underestimate the knowledge of the structure of the positive differential effect, i.e. partial effects. They make it possible to assess which of the partial effects is more or less involved in the *differential effect of inter-organizational synergy*.

The results showed that, thanks to relationships with its main customers, the manufacturing company achieved a higher exchange effectiveness than in the case of relatively independent activity. This explains the decisions on co-operation and allows us to treat inter-organizational relationships as a means (tool) for increasing the effectiveness of exchange of products or services.

The use of the differential effect of inter-organizational synergy in the case study as a synthetic measure for assessing the effectiveness of recursive relationships of a company with the supplier and the customer indicates its utilitarian value.

Conclusions

The differential effect of inter-organizational synergy is a tool of high usefulness for business decision making. In practice, it can be used as a selection criterion in the decision-making process if it is considered in terms of improving the system, verifying variants and seeking the optimum solution⁴⁷.

The study shows that the dependence of the growth of effectiveness of the manufacturing company on the external partners, i.e. the main supplier and the main customer, indicates, on the one hand, the utilitarian use of the synthetic indicator of assessing inter-organizational business relationships; on the other hand, it reveals the need for quantitative studies aimed at identifying the dependence of growth of effectiveness of small and medium companies on their external partners (cognitive importance). One cannot ignore the fact that the strong relationships reflecting total commitment leave little room for freedom of action and may greatly reduce creative work, which in turn will block the organization's co-evolution with its environment⁴⁸.

The results of the study enriched the current state of knowledge of effectiveness premises for the co-operation of small and medium enterprises. Although case studies confronted with the literature have their cognitive value, they are not exempt from verification using a representative sample.

The proposed criterion for assessing the effectiveness of business co-operation with external partners is tailored to theoretical statements and to practical needs and conditions arising from the use of the results and conditions for obtaining the information and its features.

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⁴⁷ H. Piekarczyk, *Efekt organizacyjny...*, op.cit., pp. 7–8.

⁴⁸ M. Bratnicki, K. Bratnicka, *Strategiczny wybór oparty na twórczości*, in: E. Urbanowska-Sojkin (ed.), *Wybory strategiczne w przedsiębiorstwach: uwarunkowania*, Wydawnictwo Uniwersytetu Ekonomicznego w Poznaniu, Poznań 2011, p. 36.

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UTILITARIAN AND COGNITIVE VALUES OF THE INTER-ORGANIZATIONAL SYNERGISTIC EFFECT. CASE STUDY

Abstract

The paper points out the usefulness of the differential effect of inter-organizational synergy as a synthetic measure for assessing non-market and non-hierarchical business relationships. For this purpose, the author elaborates on a tool for measuring the differential effect of inter-organizational synergy, treated here as a means (assessment criterion) of the research of the relationship between the company and its specific supplier or customer. Additionally, due to the dichotomy of non-hierarchical and non-market business relationships, the author used in the case study a set of characteristics proposed by W. Czakon to determine the type of inter-organizational relationship. The identification of inter-organizational relationships of this company has been conducted on the basis of estimating the values of characteristics (attributes) of relationships, including one relating to the main supplier, and the other relating to the main customer. Furthermore, the author diagnosed one of the most important motifs for interacting with the main customer and the main supplier, i.e. an increase in the efficiency of mutual exchange.

KEY WORDS: COOPERATION, INTER-ORGANIZATION RELATIONSHIPS, INTER-ORGANIZATIONAL SYNERGETIC EFFECT

UTYLITARNE I POZNAWCZE WALORY MIĘDZYORGANIZACYJNEGO EFEKTU SYNERGICZNEGO. STUDIUM PRZYPADKU

Streszczenie

W publikacji wskazano na użyteczność efektu różnicowego synergii międzyorganizacyjnej jako syntetycznego miernika oceny nierynkowych i niehierarchicznych więzi przedsiębiorstwa. Na rzecz realizacji celu opracowano narzędzie pomiaru efektu różnicowego synergii międzyorganizacyjnej traktowanego tu jako środek badania (kryterium oceny) efektywności więzi przedsiębiorstwa z konkretnym dostawcą i konkretnym odbiorcą. Dodatkowo ze względu na dychotomiczność niehierarchicznych i nierynkowych więzi przedsiębiorstwa w studium przypadku wykorzystano zestaw cech zaproponowanych przez W. Czakona do ustalenia typu więzi międzyorganizacyjnej. Rozpoznanie typu więzi międzyorganizacyjnych

tego przedsiębiorstwa zostało przeprowadzone na podstawie oszacowania wartości cech (atrybutów) więzi, w tym jednej odnoszącej się do najważniejszego dostawcy, a drugiej odnoszącej się do najważniejszego odbiorcy. Ponadto rozpoznano jeden z motywów współdziałania z najważniejszym odbiorcą i najważniejszym dostawcą, a jest nim wzrost efektywności wzajemnej wymiany.

**SŁOWA KLUCZOWE: WSPÓŁDZIAŁANIE, RELACJE MIĘDZYORGANIZACYJNE,
MIĘDZYORGANIZACYJNY EFEKT SYNERGICZNY**