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THE INFLUENCE OF TRUST ON REDUCTION OF COOPERATION RISK IN LOGISTICS

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Abstract: The influence of logistics on competitive advantage of cooperating parties, as well as risk associated with changing operating conditions increase the importance of trust, that partner works for mutual benefits, even if detailed regulations regarding the response to changes in the environment are not included in contract. The objective of paper is to present the role of trust in reduction of risk of logistics cooperation between principal and provider of logistics service. Typology of main risk factors, characteristics of trust between companies, as well as role of trust in different types of cooperation relationships are taken into consideration.

1 Introduction

The influence of logistics on competitive advantage of cooperating parties, as well as risk associated with changing operating conditions increase the importance of trust, that partner works for mutual benefits, even if detailed regulations regarding the response to changes in the environment are not included in contract. Under the influence of behavior of parties and actions taken trust between cooperating units may increase over time. In the case of unfavorable, opportunistic actions, trust can be reduced or even eliminated.

The objective of paper is to present the role of trust in reduction of logistics cooperation risk between principal and provider of logistics service. Typology of main risk factors, characteristics of trust between companies, as well as role of trust in different types of cooperation relationships are taken into consideration. The content of paper is prepared on the basis of theoretical considerations and results of empirical research instead of results presented in literature, as well as on own considerations and empirical experience of author. (The publication was financed from the resources allocated to the Management Faculty of Cracow University of Economics, under the grant for the maintenance of the research potential).

2 Risk of logistics cooperation

Considering description of risk in logistics cooperation it should be noted, that such a risk is multidimensional. Different types of risk are characterized by different components. There are factors that can be controlled and other, uncontrolled. In addition, the way of determining this risk is to a large extent subjective. Risk of cooperation is usually perceived negatively, and the main manifestation of its occurrence is the non-performance or unsatisfactory performance of service provider [1-7].

Description of risk of cooperation with specialized vendor of logistics services can be done by presentation of typologies of major risk factors, generally divided in two groups: external factors – appearing in the environment of cooperation and internal factors - dependent on principal (recipient of service) and service provider (including also the relationship between main vendor of service and its subcontractors). External factors are related in particular to law, politics and the economy, but also natural elements and events that affect joint activity of recipient and vendor. Internal conditions of cooperation risk concern especially parties' behavior and relationships between them. Such conditions can be identified using transaction costs theory [8,9], theory of incomplete contract [10] as well as agency theory [11], developed on the basis of transaction costs theory. As a starting point of description of risk of logistics cooperation, major risk factors and examples of negative scenarios, dependent on provider and principal should be highlighted (Table 1).

Table 1 Risk factors dependent on principal and provider principal and vendor of logistics service in logistics cooperation [12]

-	ине т наж јастога асренает оп ртистр	or I Risk factors dependent on principal and provider principal and vendor of togistics service in togistics cooperation [12]				
	Risk factor	Negative scenarios influenced by factor				
	Opportunism of logistics service provider	Differences appearing in comparison of offer of service provider and its actual ability to perform the requested tasks, disruptions in risk communication between principal and provider, excessive dependence on provider, conflicts between parties (resulting with involvement of court), loss of control over performance of service ordered.				
	Asymmetry of information between	Risk communication between cooperating partners, differences between				



principal and service provider	provider's offer and its actual ability to carry out services ordered, insufficient knowledge of principal about the quality of provider's performance, problems related to cooperation management (especially coordination of this cooperation with the service provider).	
1 1	Misunderstanding in the area of mutual expectations, difficulties in determination of expected effects of cooperation, excessive dependence on service provider, problems related to cooperation management (especially coordination of this cooperation with the service provider), conflicts between parties (resulting in interference by the courts), loss of principal's control over activity performed by provider.	
	Lack of knowledge concerning changes of offers, as well as new offers on service market, excessive costs of obtaining expected quality of service provided (if there are units on the market that offer similar quality at a lower price).	
Difference in perception of risk by cooperating parties	y Problems concerning risk communication between partners.	
Assets specificity (often related also to the limited availability of offers of service units on the market)	Excessive dependence on service provider.	
Cause and effect relationships between activities of principal and service provider	Long period of coordinating activities, joint problem solving and mutual adjustment.	
Insufficient mechanisms to control the activity of service provider by principal	Loss of principal's control over activity performed by service provider.	
Insufficient involvement of service provider in improvement of cooperation	Insufficient development of activity of principal.	

The specificity of factors in the area of logistics cooperation is reflected by attitudes of suppliers and recipients of principal, concerning the activity of service provider who takes over the flow of supply for principal and distribution of its products to recipients. Under these conditions, the image of principal created by its suppliers and recipients is influenced mostly on activity carried out by logistics service provider.

Considerations regarding external risk factors of logistic cooperation can be initiated with universal (independent of types of service provided) problem of adverse behavior of service provider related to the influence of other principals cooperating with such provider.

Taking into account characteristics of business of different clients cooperating with provider, even clients of provider competing with considered principal, it is important to pay attention to possible disloyalty of such provider, which can be reflected by:

- provision of information about market achievements to competitors, under the pressure of other principals on service provider,
- copying solutions related to flow of goods, developed with considered principal in cooperation with its competitors,
- informal agreement between service provider and selected client (principal), resulting in limitation of access for other clients to services provided (especially important in the conditions of high specificity of assets in cooperation).

Together with factors presented above, resulting from characteristics of relationship between service provider and its principal as well as between principals, there are other factors in the environment of cooperation (Table 2).

Table 2 Risk factors in the environment of logistics cooperation [12]

Risk factor	Examples of scenarios		
Technical and technological development	nt Affects the improvement of logistics activities, but also other areas		
	of the company's operations, related to logistics, as for example development of IT tools supporting enterprise resource management.		

Changes in regulations of law, regarding	Solutions related to traffic, road, rail, air and sea transport, disposal		
the field of activity, being the subject of	of waste, secondary raw materials, transport and storage of		
cooperation	hazardous materials.		
Changes of legal regulations,	Agreements concerning: documentation of international road		
international agreements and conventions	transport of good – CMR (convention concerning the international		
	standard of consignment note in road transport), treatment of		
	specific types of goods in transport – ADR (carriage of dangerous		
	goods by road).		
Changes of customer preferences	Change in the size of demand, changes of expectations regarding		
	the ranges and types of services offered.		
Development of logistics service market	Introduction of new service providers to the market, development		
	of offers of existing providers, mergers of enterprises, in order to		
	increase competitive strength.		
Changes of road and rail infrastructure	Extension of transport routes, related delays, compared to the		
	assumptions of plans before the period of repair started.		
Changes in the organization of market of	Transformation of enterprises, operating in the area of railway		
considered service	transport (in Poland).		
Changes of conditions on air transport	New connections, new airports.		
market			

It should be emphasized, that none of parties to the cooperation has any influence on factors included in Table 2. Ways to deal with such risk factors may be reflected in the contract between principal and service provider by including so-called emergency plans. Such plans are applied in the face of changes that may occur in the environment, including possibility of renegotiating terms of cooperation between parties.

Taking into account considered risk factors and related scenarios it should be noted, that consequences of each scenario for client, as well as for service provider are subsequently defined and response options for each individual risk factor are determined. As a result, mechanisms for reaction to risk factors are designed [3,7].

In the discussion on the implementation of described actions in response to risk attention should be payed on costs of actions, as well as on costs of appearance of each risk factor. Actions should be taken in response to important risk factors in case of high probability of their occurrence.

3 The problem of trust in cooperation

In general description of trust, based on sociology it can be understood as assumption made about the uncertain future actions of other people. It consists of beliefs and their expression in the form of actions of the person who trusts [13]. This assumption is adopted in the belief that other members of community is characterized by fair and cooperative behavior, based on shared standards [14].

In considerations regarding trust in cooperation, significant importance is attributed to shaping the conditions for development of trust in cooperating relationship. The transaction (treated individually) can be treated as the basis for creating such a relationship. A distinction is made between cooperation based on separate transactions and a relational exchange, evolving over time,

in which each subsequent transaction is considered and evaluated from the point of view of the past and the future of cooperation [15-18]. Interest in cooperation relationship as the object of scientific study has grown along with development of concept of relationship marketing [19] as well as with spread of relational paradigm in management science [20], which was developed as network paradigm [21, 22]

The ability of trust development is the indication, that trust is of dynamic nature. In the model approach, development of trust can reflect its three levels: trust based on calculation, knowledge-based trust and trust based on identification [23]. On the level of trust, based on calculation, the calculation of costs and benefits from the relationship plays a crucial role. The next level (knowledge-based trust) is achieved thanks to regular contacts between partners, obtaining information and predictability of the other party's behavior. The highest level of trust in model it is trust based on identification. It concerns identifying with intentions and expectations of partner. It can be developed when partners know each other, predict their behavior, but also expect continuation of trust [24]. It should be added, that cooperation includes also individual transactions carried out by Internet platforms in which parties don't know each other before beginning of transaction, and don't expect closer relationship after completing the transaction. Reliance on characteristics, abilities, strength of vendor play major role in such conditions [25,26]. According to presentation of levels of trust mentioned earlier it seems, that in such situation also trust based on calculation can occur.

In considerations concerning the meaning and conditions of development of trust in enterprises' activity it is important to highlight several dimensions of description and analysis of trust in cooperation relationships. Contractual dimension concerns the belief that partner will



act for mutual benefits, even if there, are arrangements not reflected in contract. Dimension of trust in competences is related to expectation, that exchange partner will implement commitments undertaken in accordance with requirements in terms of quality of performance. Third dimension concerns trust in goodwill of partner. [18,27]. Presented aspects show the overall picture of trust in cooperation. They can be treated as a reflection of the development of trust, along with the development of the scope of cooperation and the extension of its duration. Therefore, depending on assumptions, concerning objectives of cooperation and its duration, the significance of individual dimensions of trust may change. In cooperation with service provider, performing short-term simple supporting tasks for client, the contractual aspect of trust may be most important. If parties cooperate taking joint investments for mutual benefits, apart from the dimensions of trust mentioned so far issues of goodwill, initiative and commitment to develope the cooperation, even beyond regulations of the contract play also an important role [28].

Emphasizing the importance of trust in development and maintenance of cooperation it should be noted, that trust is distinguished among key factors affecting the stability of relationship. This stability can be defined as a reflection of a stable, mutual attitude, that fosters relationship within a fixed period [27]. It goes beyond the positive evaluation of the partner in cooperation, based on current benefits and costs related to the relationship. It involves taking account of mentioned long-term orientation and willingness of each party to short-term sacrifices in the way to achieve long-term, mutual benefits [15].

4 Influence of trust on reduction of risk in cooperation with logistics service provider

Trust as mechanism for risk reduction, replacing or supplementing requirements of coordination and control of partner usually develops with learning of activitiy and achievements of this unit. Applied organizational, procedural solutions and adopted ways of behavior in relationships with other companies, which are perceived as a confirmation of credibility, accelerate the development of trust in such an entity. Such factors influence also the scope of regulations, regarding coordination and control of cooperation. Certificates and accreditations issued by independent entities can be treated as confirmation of reliability, as well as mechanism of reputation [29,30]. If reputation cannot be verified in considered company information is obtained from other parties cooperating with The reputation is reflected in such company. recommendations issued for such partner.

Trust always involves risk. Adoption of bet on the result of activity (as a sign of trust) can be understood only in the conditions of awareness of the possibility of alternative results. Treating trust as a risk consists in omitting the main point regarding trust: it opens the door to positive results that would be impossible without it. [30].

Defining the role of trust in reduction of risk of logistics cooperation, one can assign trust level to different types of cooperation, level of risk of each relationship as well as the importance of trust in its reduction. It is listed in Table 3. The cooperation relationships are diversified, especially from the point of view of scope of cooperation, related connection between vendor and recipient, susceptibility to abuses and interruption of cooperation and the need to control performance of vendor.

Table 3 Influence of trust on risk depending on types of cooperation [1,18,23-27]

144	ne 3 influence of trust on risk depending on types of cooperation [1,18,23-27]
Level of trust	Basic terms of cooperation Status of transaction costs and risk sources
Reliance on character, abilities, strength of vendor, including, appearance of trust based mainly on calculation (concerning costs and profits of cooperation)	 incidental transactions, carried out using online platforms (for transport, storage), parties to transaction often don't know each other (before beginning of transaction), usually low value of single transaction, ease of determination and comparison of service value, wide access to information about provider, no need to exchange information concerning further cooperation between parties, no need to invest in specific assets for transaction, lack of profitability of opportunistic attitudes of vendors, low level of external risk, importance of internal risk factors influencing cooperation, small influence of contractual trust on reduction of transaction risk.
Trust based mainly on calculation	 low cost of determining the value of service (known requirements for the carriage of goods, fixed route, well-known storage conditions, requirements for forwarding activities), wide access to information about provider, no need to exchange information concerning further cooperation between parties, no need to invest in specific assets for transaction,



	low value of transaction for – lack of pro	
	recipient, attitudes of ver	
	*	of internal risk factors
		operation, higher level of
	7	and of control tourst in
		ance of contractual trust in
	cooperation not treated as a source of competitive advantage.	ilisaction fisk.
Trust based mainly	higher sensitivity of cooperation - limitations an	d high costs of access to
on knowledge about	to interference and interruption, information,	
the partner	relates often to a greater level of - need to	invest in specific
	integration of logistics activities equipment/infr	astructure (specialized
		, equipment for loading and
	there is a need to use behavior unloading),	
		unistic behavior can be high
	•	s used to influence behavior),
		portance of contract
	allow to assign costs (to be paid) incompleteness	
		pact of internal and external
	attitude, risk factors on	
		of trust in reducing the risk of
		specially the risk related to
	competitive advantage, but only in concluding	
	the conditions of differentiating operations und	
		nce of contractual and
		rust, need for trust in the
	goodwill of pa	
Trust based on		ation transfer is the basis for
identification with	of integration of logistics establishment	and implementation of
partner (with its	activities and joint development cooperation,	
activity, image)		ity of assets, used in
	long period of previous cooperation,	
		stments of both parties in
	other), assets used in a	
		rtunistic behavior (effects of
		are very expensive, can result
		oblems on the market),
		ontract incompleteness,
	-	external risk, internal risk is
	,	of trust in reduction of
	interference, cooperation ris	of trust in reduction of
		trust in contractual and
		pects, as well as importance
	_	lwill of partner.
	competitive advantage.	or pararer.
L	componer to auranage.	

It is worth noting, that also distrust associated with the resignation from the need to trust other party is treated as a rational tool to avoid risky situations. In conditions of undertaking actions inconsistent with expectations of trusting party its trust may be irrational. In any case, the social system, created by representatives of cooperating companies is more or less endowed with external mechanisms in the form of legal and social sanctions to

enforce the general principles according to which expectations towards others are taken in accordance with the law [31].

Considering presented impact of trust on reduction of risks and uncertainties associated with entering into cooperation it is worth paying attention to the situation in which one of parties to cooperation may reduce or even lose trust. Risk-reduction mechanism based on trust is



ineffective in this context. The party, that lost trust in partner may strive to complete cooperation. However, this is possible primarily in the context of low specificity of assets used in cooperation, often associated with the lack of integration of cooperating activities and the small impact of partner change on the performance of the party breaking cooperation. In the case of previous long-term partnership cooperation, based on the high specificity of infrastructure and equipment used in joint operations, but also in the conditions of high dependence on provider, related to difficulty of obtaining resources from another party, a quick solution may be too expensive and even impossible.

In the conditions of a high level of integration of activities of cooperating parties it is important to react quickly and take corrective actions, usually related to regulations agreed in the contract, enabling renegotiation of the contract terms, increase the level of cooperation monitoring, temporary or permanent limitation partner's influence on the activity of party, that lost trust in partner. It should also be noted that usually rebuilding trust is a process that lasts longer than the initial development of trust when starting cooperation.

5 Summary and conclusions

The content presented in this article was prepared primarily on the basis of presented in the literature theoretical considerations and results of empirical research concerning trust in cooperation and its impact on the reduction of risk and uncertainty in cooperation relationship. Own reflections as well as practical experience of author were also used.

Issues included in the article are treated as most important to provide a comprehensive picture of the impact of trust on risk of cooperation. In practice, the diversity of problems related to shaping trust and its impact on reducing the risk of cooperation can be significantly greater. It may be related to much greater diversity of forms of cooperation, compared to those presented in Table 3. Principles of cooperation, mutual obligations and rights taken in response to risk may also be different, depending on changes of risk factors. It is also worth paying attention to diversity of organizational tendency to trust, influenced by individual attitudes of employees of cooperating companies, responsible for results of cooperation in future.

An important limitation of cooperation may also be a loss of confidence, especially as a result of partner's actions, which although not intended to harm the other side, but the effects of these actions have been interpreted in such a way. It may not be possible to restore previous trust. Consequences concern reduction of level of integration in cooperation. In case of lack of such opportunities, there is a possibility to strive introducing changes to contract, that would more effectively protect injured party.

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