CONDITIONALITY AND UTILIZATION OF INTER-ORGANIZATIONAL RELATIONSHIPS ON THE INDUSTRIAL MARKET OF THE SLOVAK MECHANICAL ENGINEERING

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Podmienečnosť a využitie medziorganizačných vzťahov na priemyselnom trhu slovenského strojárenského priemyslu

Abstract: *Inter-organizational relationships in the industry do not involve just the buyer–seller relationship, but it is a deeper cooperation leading to an increase in added value for the final consumer. The author deals with the current situation in the use of various forms of inter-organizational relationships in the Slovak engineering industry and with the conditions of their formation. This article aims to show the possibilities for deeper cooperation in this industrial sector.*

Keywords: *inter-organizational relationships, industrial market, mechanical engineering*

JEL Classification: L 22, M 11

1 Introduction

On the industrial market, customer-supplier relationships are not only mutual contacts of buyer and seller but also various forms of cooperation. Their substantive content presents the purchase of products and services based on economically motivated decision of both participants of this relationship. The industrial market is the largest of all business markets (Kita et al., [4]).

American authors Dwyer and Tanner identify four types of customers on the business market. Firms that consume the product or service (such as original equipment manufacturers – OEM and users), government agencies, institutions, and firms that purchase and resell the product industrial distributors (Dwyer and Tanner, [2]).

Business market (B2B) can be characterized by the following specifics (Malaval and Bénaroya, [8]): a low number of customer concentration,

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heterogeneity of customers, foreign customers, collective buying process, active role of customers, deep interdependence between the customer and the supplier, value creation, unique promotional strategies (exhibitions, trade shows, fairs, conferences, journals, and company visits), longer life-cycle, greater web integration and using specific internet tools (e-procurement, marketplace, EDI), and other specifics named by Kita as specifics of demand, technical specifications, awareness of buyers, and determining the influence of the environment (Kita, [5]).

The object of deep supplier – customer relationships on the industrial market is the supply of products or services necessary for the production process. The object of these exchanges can be mineral, coal, agricultural products, gas, energy, raw materials, component parts, machines, buildings, inventory, manufactured materials, information, facilitating services, final products, semi-finished products, and other specific forms of products (Ďaďo and Poliačiková, [1]). The life cycle of product on the industrial market is contrary to the life cycle of consumer goods on B2C market. Products like raw materials and semi-finished products that are intended for further processing can remain in the phase of maturity for 20–25 years.

For industrial companies, it is crucial to understand the micro and macro position on the market. Each company has its own macro position on the business market, which reflects the importance, role, impact, and ability of the company to operate other companies. The micro position is expressed by impact on a particular business partner (Kita, P., [6]).

Inter-organizational relationships on industrial market

For business exchanges to take place, there has to be a free will of at least two entities. Where is an interaction, there is a relationship (Francová and Oreský, [3]). Customer and supplier partnership is manifested by creating a permanent mutual co-operation of both parties. It is based on the dynamics of long-term mutual adaptation of values. The customer should also take into consideration what they bring to the supplier. When the customer reinforces its original position, they acquire an additional ability to influence the business partner – supplier (Kita, P., [6]). Based on the findings of Narayandas and Kasturi Rangan, we can assume that a smaller, weaker company after overcoming initial asymmetry can benefit from relationships with a stronger partner. Owing to interpersonal confidence, there is intensification of supplier and customer relationships (Narayandas and Kasturi Rangan, [9]).

Creation of value is often based on the active role of the customer that not only makes an order for supplies, but also actively participate in solving particular technical problems. This active role of the customer is particularly evident in the projection of sophisticated products (products with higher

added value), when the supplier does not without place an order without customer's constant intervention. This results in considerable supplier and customer dependence. Malaval recalls that customer activity begins in the preparation phase, when both parties recognize the real needs of customer (Malaval and Bénaroya, [8]).

In most cases on the industrial market, a distribution channel is shorter than that of B2C market. Many manufacturers sell their products and services directly to the consumer, i.e. other producing company. According Kotler, also business buyers often buy directly from manufacturers rather than through intermediaries, especially items that are technically complex or expensive such as mainframes or aircraft (Kotler, Keller, [7]). Shorter distribution channel leads to the development of closer relations between supplier and purchaser companies. Due to stronger relations and short distribution channel is very important personal selling.

Supplier and customer cooperation is one kind of creating the competitive advantages. In the case of sourcing, industrial market manufacturers are adopting various strategic alternatives (make or buy), for example: make the products themselves, let the supplier produce, or produce in cooperation with suppliers. This cooperation can pursue two goals: the defensive goal that supposes reduction of risks and the offensive goal that creates new market opportunities.

In case when manufacturers let suppliers produce, some parts of their production activities are delegated to other manufacturers – suppliers. The advantage of these relationships is that they involve value added growth. There are some kinds of relationships, e.g. simple supply relationships, subcontracting relationships, outsourcing, or franchising. We can name two types of simple supply relationships – privileged and specialized. There is a standard supply. In fact, it is not a cooperative relationship. Other kinds are subcontracting relationships that are often used in the construction and engineering industries. Relationships between suppliers and customers based on the strategy of producing in co-operation take the form of agreements under which the companies collaborate.

2 Methodology

Industrial market is characterized by a high heterogeneity; therefore we conducted qualitative and quantitative research. In order to examine inter-organizational relationships in detail, we carried out semi-structured interviews. Among fifteen respondents were purchasers, sellers, managing director or owners of industrial companies. One part of the interviews concerned customers – manufacturers, and the other part concerned suppliers. We investigated what was the object of customer – supplier relationship. Our

interviews focused on identifying all types of relationships and conditionality of their creation. The aim of quantitative research carried out in sixty-seven engineering companies was to find out the utilization of different kinds of inter-organizational relationships. The results of qualitative and quantitative research lead to identifying the possibilities for deeper cooperation on the Slovak industrial market.

3 Conditionality of creation of inter-organizational relationships

The industrial market differs from B2C market also in terms of influence of marketing impulses on customer buying decision. We studied the impact of the individual components of marketing mix on customer buying decisions.

"Clearly, we bring to our customers solutions to their problems. For manufacturers the most important is technical side, then the date and ways of delivery and of course price."

"It depends on production phase when our customer requests us. Mostly, it is still in the phase of development. The most important for our customer are the costs to be paid for it. But when the customer produces defective products, loses material and time, of course the most important factor is a quick and immediate solution."

Supplier selection is influenced mainly by technical parameter of the product, its availability, price and communication, which also conduces to the customer–supplier relationship.

The industrial market is specific by its offer, quantity and variety of customers, value, and volume of purchases. We asked companies how many suppliers they had or how many partners they cooperated with, and if they had one or more suppliers for one product. Then we put an analogical question to suppliers. We asked them how many customers they had or with how many partners they cooperated and if they had one or more customers for one single product.

"From 1500 to 2000 according to the order, we have approved around 2,500 suppliers."

"In all we have about 20 suppliers."

"We have about 70 customers. In case of standard products, there are many customers, but there are also unique orders."

The number of suppliers increases with the number of purchased products but not proportionally, seeing that industrial enterprise can have only one supplier for a particular homogeneous product groups and vice versa, there can exist several suppliers for one purchased product. The number of customers

depends on the market situation and characteristics, the marketing strategy of the company and on the number of potential customers in all industries.

We asked our respondents to indicate who their suppliers are. We wanted to characterize their suppliers and relations with them. Moreover, we were interested whether they maintained long-term relationships with their suppliers.

"It is an individual. We have large and small suppliers, new and old ones. Since we have an important market position, we have power and we determine the conditions. We try to maintain a long-term and strong relationship with our suppliers."

"Our suppliers are small and large companies from various industries. It is in our interest to have good and long-term relationships with the best and the most important suppliers."

"Our customers are different. We have several large engineering and construction companies making 70 – 80% of the turnover."

"Our customers are developers and designers of plastic parts and manufacturers of mold and plastics producers."

Generally, manufacturers can determine their suppliers. There are micro, small, medium-sized and large companies from various industrial branches and services. Again, we can see a typical attribute of the industrial market, namely the heterogeneity of companies operating on this market. Respondents declared their desire maintain good and long-term relationships with suppliers. We can point out that the customer's part of supplier's turnover is bigger; the possibility of a strong and long-term relationship is higher, because the supplier records the risk of dependence. The risk of dependence can be also on the customer side, when there is no competition on the supplier's market. Pareto's 80/20 rule applies in the customer – supplier relationships. Approximately 20% of customers make about 80% of turnover, and 80% of customers make about 20% of turnover. This also applies vice versa in the relation of particular suppliers to the value of purchase (Pajonk, [10]).

Industrial enterprises use various inter-organizational relationships (IOR). On the basis of interviews with representatives, we identified several basic types of IOR. There were mainly simple supply or buy, subcontracting and cooperation. Each of these types of relationships can take many forms. Table 1 shows under what conditions industrial enterprises enter into inter-organizational relationships.

Table 1

Condition of existence of inter-organizational relationships

Type of IOR	Condition
Simple supply	Standard product Strong competition
Subcontracting	Complicated pieces Technological complexity Absence of know-how Insufficient production capacities Absence of human capital
Cooperation	Complicated product Absence of know-how Technological complexity Participation in development Close cooperation

Source: author's elaboration.

The strategic decision of the customer whether to buy products directly from the manufacturer or through an industrial distributor is influenced by minimizing purchase costs, availability of products on the market, bargaining position of the customer related with the value of purchased products, geographical distance, and existence of qualified personnel responsible for the purchase.

"We try to procure mainly from manufacturers, approximately 90%. It is our philosophy. If it is not possible, then comes round to distributor."

"On the market of engineering industry we sell directly to the manufacturer and on the market of the building industry we sell directly but also via distributors. It depends on the size of the company and on number of products."

There are two basic strategies relationships "Make" and "Buy". When the industrial enterprise has the necessary know-how and an adequate production capacity, it chooses the "Make" strategy. This is mainly for production of parts, assemblies or subassemblies. And vice versa, the manufacturer decides for "Buy" strategy when the purchase cost is lower than would be the cost of production, when the production requires specific know-how or certifications that the company does not have.

The type of inter-organizational relationships is one of the factors affecting the creation of risks or the reduction of risks. We asked representatives of manufacturers which type of customer-supplier relationship they use.

"*In the case of standardized products, we purchase them through industrial distributors. If there are some parts or assemblies we prepare a tender; we send the project documentation (what we let produce), and on the basis*

of several offers we choose one subcontractor. Some parts of products we develop and produce in cooperation with other companies."

"We use basic relationships but also cooperation. It depends on a particular project."

On the basis of quantitative research (67 respondents) we can point out that Slovak industrial enterprises use various inter-organizational relationships mainly simple supply or buy. It is a case of procurement of raw materials (98.5%), auxiliary material (86.57%), services (64.18%) and building (67.16%). They use subcontracting when they do not have know-how or production capacity for example in case of machinery, software and semi-products. Cooperation is used mainly when manufacturers procure machinery, software and semi-products. Each of these types of relationships can take many forms. Table 2 shows division of IRO depending on type of purchased products.

Table 2

IRO depending on type of purchased product

Products/IRO	Simple supply	Subcontracting	Cooperation
Raw materials	98.5%	1.5%	0%
Semi-products and parts	49.25%	40.29%	10.46%
Auxiliary material	86.57%	13.43%	0%
Machinery	28.35%	55.23	16.42%
Software	28.35%	61.2%	10.45%
Services	64.18%	28.35%	7.47%
Building	67.16%	32.84%	0%

Source: author's elaboration.

In the case of "Buy" strategy, industrial enterprises recognize several types of IOR. The first type is a simple supply or buy. Enterprises consider that it should be the most used type of relations between customers and suppliers. The object of simple buy is to procure standard products manufactured in large series. Another very common inter-organizational relationship is subcontracting. This is a prototype of IRO on the industrial market under the "Buy" strategy. Responding enterprises enter to a subcontracting relationship when they do not have the machinery, know-how, human capital, capacities for production or material resources. It is evident from the interviews that manufacturers perceive cooperation as a higher form of subcontracting. The supplier cooperates with customer in several phases, from development of product to production phase.

We asked the question: "In your opinion, what affects the customer – supplier relationships?" Manufacturers responded as follows:

"It is a nature of the purchased product, standard, uniqueness of the product, price, quantity, market situation, history of the supplier."

"I think that it is mainly experience with the contractor, number of products and the possibility of procurement from competitors, the value of the product, share on purchase, share on sales."

We can consider the following factors as those that affect inter-organizational relationships: confidence, willingness, number of purchased products, their quality and added value for the customer, standards respectively uniqueness of products, their availability on the market, price, cost of acquisition, financial involvement, share of customer's purchasing portfolio, or the share of supplier's revenue. See the summarization of factors in Table 3 Factors influencing inter-organizational relationships.

Table 3

Factors influencing inter-organizational relationships

	Factor
Nature and characteristics of products	Uniqueness Standard Quality Quantity Customer's benefit Importance of product in the whole production process
Price and costs / value of product	Product price Share of customer Share of supplier Financial involvement
Ability to meet liabilities	Reliability Flexibility Punctuality of delivery Solvency
Atmosphere in relationship	Trust Willingness Dependence
Market situation	Competition Dominant position Product availability

Source: author's elaboration.

On the industrial market, the competition between suppliers can present some opportunity for customers to obtain desired products under more favourable conditions.

2 Conclusions

On the Slovak industrial market there are two basic strategies how enterprises can procure products necessary for production. It is "Make" or "Buy" strategy. When an enterprise has the necessary know-how and adequate production capacity it selects the "make" strategy. Vice versa, the manufacturer decides for the "Buy" strategy when the purchase cost is lower than would be the cost of production, when the production requires specific know-how or certifications that the company does not have. In the case of the "Buy" strategy, we can distinguish several inter-organizational relationships. There were mainly simple supply or buy, subcontracting and cooperation. Cooperation as an IRO type is the least used type on the Slovak industrial market, in spite of its many benefits. We recommend creating long-term relationships based on cooperation.

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