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**EMPIRICAL MODELS OF PARTNERSHIP FOR ASSESSING
OF INTER-ORGANIZATIONAL RELATIONSHIPS
IN SUPPLY CHAINS**

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**ЕМПІРИЧНІ МОДЕЛІ СПІВПРАЦІ ДЛЯ ОЦІНКИ
ВЗАЄМИН У ЛАНЦЮГАХ ПОСТАЧАННЯ**

Мета статті полягає в відображенні декількох емпіричних підходів, які можуть вдало використовуватися у вивченні міжорганізаційного обміну й взаємин постачальника-покупця в ланцюгах постачання. У зв'язку з чим ключові характеристики деяких моделей співпраці обговорюються.

Ключові слова: взаємовідношення постачальник-покупця, компоненти співпраці, міжорганізаційні взаємини

Целью статьи является предоставление несколько эмпирических подходов, которые могут успешно использоваться в изучении межорганизационного обмена и взаимоотношений поставщика-покупателя в цепях поставки. В связи с чем ключевые характеристики некоторых моделей сотрудничества обсуждаются.

Ключевые слова: взаимоотношение поставщика-покупателя, компоненты сотрудничества, межорганизационные взаимоотношения

Problem Statement. Supply chain management is closely tied to concepts such as strategic alliances, partnerships and other co-operative relations with supply chain members [1, 2, 8, 15]. A supply chain can be seen as a portfolio of relationships and processes that should be managed like products or customers, based on the resources required and revenues generated by them [1, 7]. Supply chain management is also claimed to be more than a materials movement or transportation initiative, and is rather considered a new way of thinking about business relationships and a complete business relationship model [12, 15]. The research on supply chain management should attempt to integrate both the transactions and the relationships between various firms in order to promote full understanding of the concept [8]. The companies often misleadingly think of Supply chain management only as materials movement and transportation, and not as a complete business relationship model [12]. The long-term relationships in a supply chain are founded not only on hard performance elements (e.g., cost, time and quality), but also on people-oriented factors such as trust and commitment [1, 16]. In the terms of the financial and economic crisis the topic of the cooperation is very important for the Small and Medium Size Enterprises' (SME). In the paper [14], research in the direction of the strategic goal called by "Clever Rational Society" (CRS) is represented - through the usage of the contemporary Internet and other technologies and science to assure the correspondence between the society goals and the interests of humans and human groups, and rationality everywhere. Companies in the supply chain are contractors and subcontractors and the subcontractors need support. Required conditions for the effectiveness of small businesses are the parameters of dirigibility and adaptability. One of the forms for logistic support for the subcontractor of the enterprise is the foresight of the behavior, wishes and demands of the contractor. In [5] is offering a general model for logistic forecast, taking into account the interrelations between the amount of sales and the quality characteristic features of the product, manufactured in the small business- subcontractor.

Paper objective. The objective of the paper is to discuss some popular empirical models of partnership for assessing inter-organizational relationships in supply chains. They can be used to develop a general set of criteria for studying buyer-supplier relationship as well as to develop a

successful inter-organizational exchange.

Model of partnership attributes. The development of the model of partnership attributes was based on a study of partnership-success factors, with respect to attributes, communication behavior and conflict-resolution techniques [11]. The aim of the study was to investigate the characteristics of partnership success in the context of manufacturer-distributor relationships. The unit of analysis was the relationship between a computer dealer and one of its suppliers. The partnership relationship was not explicitly positioned among other types of exchange relationship, whether transactional or relational. According to this study the partnerships are defined as "purposive strategic relationships between independent firms who share compatible goals, strive for mutual benefit, and acknowledge a high level of mutual interdependence" [11].

The research constructs used to evaluate partnership attributes were operationalized by means of between two and eight questions on a five-point scale for each partnership attribute – Table 1 [11].

Table 1

Partnership attributes

Partnership attribute	Question
COMMITMENT (scale: strongly agree/ strongly disagree)	We'd like to discontinue carrying this manufacturer's product (reverse-scored).
	We are very committed to carrying this manufacturer's products.
	We have a minimal commitment to this manufacturer (reverse-scored).
CO-ORDINATION (scale: strongly agree /strongly disagree)	Programs at the local level are well coordinated with the manufacturer's national programs.
	We feel like we never know what we are supposed to be doing or when we are supposed to be doing it for this manufacturer's product (reverse-scored).
	Our activities with the manufacturer are well coordinated.
TRUST (scale: strongly agree/ strongly disagree)	We trust that the manufacturer's decisions will be beneficial to our business.
	We feel that we do not get a fair deal from this manufacturer.
	This relationship is marked by a high degree of harmony.
INTERDEPENDENCE (scale: strongly agree/ strongly disagree)	If we wanted to, we could switch to another manufacturer's product quite easily (reverse-scored).
	If the manufacturer wanted to, they could easily switch to another reseller (reverse-scored).
COMMUNICATION QUALITY	To what extent do you feel that your communication with this manufacturer is: (scale: timely/untimely) (scale: accurate/inaccurate) (scale: adequate/inadequate) (scale: complete/incomplete) (scale: credible/not credible)
PARTICIPATION (scale: strongly agree/ strongly disagree)	Our advice and counsel are sought by this manufacturer.
	We participate in goal setting and forecasting with this manufacturer.
	We help the manufacturer in its planning activities.
	Suggestions by us are encouraged by this manufacturer.
COMMUNICATION (scale: strongly agree/ strongly disagree)	We share proprietary information with this manufacturer.
	We inform the manufacturer in advance of changing needs.
	In this relationship, it is expected that any information that might help the other party will be provided.
	The parties are expected to keep each other informed about events or changes that may affect the other party.
	It is expected that the parties will only provide information according to pre-specified agreements (reverse-scored).
	We do not volunteer much information regarding our business to the manufacturer (reverse-scored).
	This manufacturer keeps us fully informed about issues that affect our business.
This manufacturer shares proprietary information with us (e.g., about products in development)	
CONFLICT- RESOLUTION TECNQUES (scale: very frequent/ infrequent)	Assuming that some conflicts exist over program and policy issues and how you implement the manufacturer's programs, how frequently are the following methods used to resolve such conflicts? Smooth over the problem; Persuasive attempts by either party; Joint problem solving; Harsh words; Outside arbitration; Manufacturer-imposed domination

The research results indicated that co-ordination, commitment, trust, communication quality,

information sharing, participation, joint problem solving, and avoiding of the use of smoothing over problems or severe resolution tactics predicted success in the partnership relationship [11]. Scoring high on each of the partnership-attribute statements indicates a strong and successful partnership. Low scores on the partnership attributes characterize a weak and less successful partnership.

From methodologically point of view, the main problem in the study is that the data on partnership attributes was collected only from the retailer side of the dyadic relationship. Without the manufacturer's perspective it can only give a one-sided picture of the partnership reality.

Model of partnering component levels. This model also examines inter-organizational relationships from the perspective of partnership relationships [10]. The partnership relationship was defined as "a tailored business relationship, based on mutual trust, openness, shared risk and shared rewards that yields a competitive advantage, resulting in business performance greater than would be achieved by the firms individually". Partnerships was examined as a range of relationships between market-driven arm's-length types of trading relations and vertically integrated hierarchies, rather than as a unique relationship type - figure 1 [10].

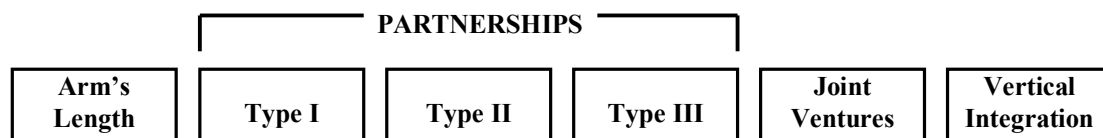


Figure 1. Types of relationship

Different partnership-relationship types are positioned between arm's-length market relations and joint ventures and hierarchies [10]. This typology ranges from relatively market driven and adversative Type-I relations via long term cooperative Type-II to Type III, which involves high levels of commitment, communication and trust.

The organizations involved in the Type-I partnership relationship consider each other as partners. They also coordinate activities and planning tasks to a limited degree. Typically this type of partnership has a short-term focus and involves only one division or functional area within each organization.

Organizations involved in Type-II partnerships aim at integrating their activities rather than coordinating activities. The partnership is a long-term, although it is not expected to last indefinitely. It also involves multiple divisions and functions from both firms.

Each organization involved in a Type-III partnership views the other as an extension of and an integrated part of their own firm. This is reflected in the willingness to engage in a significant level of operational integration. There tends to be no scheduled end date for this type of partnership.

Partnerships are not only classified but a set of partnership components and partnering-component levels, which correspond to the above-mentioned partnership types are defined - table 2. The assessment of each partnership component may range from low via medium to high, thus indicating the strength of the relationship-component [10].

In the above partnering component level descriptions, low corresponds to a Type-I partnership, scoring high on the majority of partnering components reflects Type-III partnership status, and a majority of medium scores corresponds to Type II. This classification is applicable to both establishing new partnerships and diagnosing existing relationships [10].

Partnership drivers are defined as the compelling reasons to partner, which may include asset/cost efficiencies, customer service, and marketing advantage and profit stability/growth. Partnership facilitators, on the other hand, include supportive environmental factors that enhance partnership growth, such as corporate comparability, shared competitors and shared end users [10].

Models of collaborative relationships. The classification of different models of collaborative relationships between customers and suppliers is based on the evolutionary approach to inter-organizational relationships [13], which investigates the array of different collaborative-relationship types ranging from the dichotomous arm's-length relationship to vertical integration.

Four different models are identified, which are tested empirically in a manufacturing-industry context: the demands model, the audits model, the supplier-development model and the partnership model. The unit of analysis in the investigation is the firm and its activities relating to the supplier relationship.

Table 2

		Partnering component levels		
Partnership component	Low	Medium	High	
TRUST	Trust	Trust is limited to belief that each partner will perform honestly and ethically	Partner is given more trust than others, viewed as "most favored" supplier	There is implicit, total trust; trust does not have to be earned
	Non-routine	Very limited, usually just critical issues at the task or project level	Conducted more regularly, done at multiple levels; generally open and honest	Planned as a part of the relationship; occurs at all levels; sharing of both praise and criticism; parties "speak the same language"
COMMUNICATION	Day-to-day organization	Conducted on an ad-hoc basis, between individuals	Limited number of scheduled communications; some reutilization	Systemized method of communication; may be manual or electronic; communication systems are linked
	Balance	Primarily one-way	Two-way but unbalanced	Balanced two-way communication flow
	Electronic	Use of individual systems	Joint modification of individual systems	Joint development of customized electronic communications
SCOPE	Share	Activity of partnership represents a very small share of business for each partner	Activity represents a modest share of business for at least one partner	Activity covered by relationship represents significant business to both parties
	Value-added	Relationship covers only one or a few value-added steps (functions)	Multiple functions, units are involved in the relationship	Multiple functions and units are involved; partnership extends to all levels in both organizations
	Critical activities	Only activities which are relatively unimportant for the partner's success	Activities that are important for each partner's success are included	Activities that are critical for each partner's success are included
	Style	On ad-hoc basis	Regularly scheduled	Systematic; Both schedule and ad hoc
	Level	Focus on projects/tasks	Focus on process	Focus on relationship
PLANNING	Content	Sharing of existing plans	Performed jointly, eliminating conflicts in strategies	Performed jointly and at multiple levels, including top-management; objective is to mesh strategies; each party participates in the other's business planning
	Loss tolerance	Very low tolerance of loss	Some tolerance of short-term loss	High tolerance of short-term loss
	Gain commitment	Limited willingness to help the other party gain	Willingness to help the other party gain	Desire to help other party gain
RISK/REWARD SHARING	Commitment to fairness	Fairness is evaluated by transaction	Fairness is tracked year to year	Fairness is measured over the life of the relationship
	Measurement	Performed measures are developed independently and results are shared	Measures are jointly developed and shared; focused on the individual firm's performance	Measures are jointly developed and shared; focused on relationship and joint performance
	Ability to make changes	Parties may suggest changes to the other's system	Parties make changes to the other's system after getting approval	Parties may make changes to each other's system without getting approval
	Commitment to each other's success	Commitment of each party is to a specific transaction or project; trust must be constantly "re-earned"	Commitment is to a longer-term relationship	Commitment is to partner's long-term success; it prevails across functions and levels in both organizations
	Time frame	Covers a short time frame	Covers a longer time frame	Contracts are very general in nature and are evergreen, or alternatively the entire relationship is on a handshake basis
CONTRACT STYLE	Coverage	Contracts are specific in nature	Contracts are more general in nature	Contract does not specify duties or responsibilities; rather, it only outlines the basic philosophy guiding the relationship
	Financial	There is low or no investment between the two parties	May jointly own low-value assets	High-value assets may be jointly owned
INVESTMENT	Technology	No joint development of products/technology	There is some joint design effort and there may be some joint R&D planning	There is significant joint development: regular and significant joint R&D activity
	People	Limited personnel exchange	Extensive exchange of personnel	Participation on the other party's board

Each of the collaborative-relationship models is characterized in terms of four dimensions: verification, support activities, the development of joint activities, and bounded relationships [13]. No explicit definition of these constructs is provided, but their key characteristics in each relationship model are showed implicitly in Table 3, which describes the relationship models in terms of these four dimensions [13].

Table 3

Collaborative-style relationship models and model characteristics

Activity	Collaborative-relationship model			
	Demands Model	Audits Model	Supplier-Development Model	Partnership
VERIFICATION	Output and delivery specification: ex post through initial selection may use BS/ISO standards	Move to ex ante verification covering output from manufacturing and quality control processes	Move to verification of inputs to control processes: high rating required for performance measures	Reduced verification but monitoring, spot checks; may be market testing at intervals
SUPPORT ACTIVITIES	Basic information only	Extended information on future orders; loan of tools, dies; minor investment, limited training, learning visits possible	Sharing of systems expertise, diffusion of management techniques, e.g., SPC, TQM; training and visits intensified.	More likely to be mutual, two-way, with resource support
JOINT ACTIVITIES DEVELOPMENT	Nil	Exploring scope for extending product range, flexibility potential; limited problem solving on technical matters	Joint development in R&D; joint problem-solving teams: new-product development, process improvement	More emphasis on joint development, tackling problems of a more open-ended kind; increased information sharing e.g., on costs
BOUNDED RELATIONSHIPS	Closely defined contract for specific goods and time period	Limited assurance of continuing orders subject to performance; prospect of expanded trade	Increased sense of flexibility, interdependence over defined range of activity; time horizon open	Expected time horizon unlimited; problem solving extended to joint learning; governance structure developed

The empirical relationship models discussed earlier relied on very similar descriptive dimensions, mostly of behavioral orientation, such as trust, commitment and shared values, as well as more tangible characteristics such as co-operation, communication and risk/reward sharing. Dimensions of these models, although different in terms of terminology, could also be considered to depict similar characteristics to those of the other models.

Model of partnership-success factors. This model is based on study of key-account management and the perceptions of suppliers and their key-account customers regarding the success factors of customer-supplier partnerships [6]. The unit of analysis was both the buyer's and the supplier's perceptions of key-account management strategy. The companies involved were selected on the basis of industry information, and through corporate referrals, which of companies that had implemented key-account management at least a year previously [6]. The purpose of the study was not to assess buyer-supplier relationships as such. However, in addition to elements focused on assessing perceptions of the key-account management, the measures applied also have characteristics that could be used to evaluate buyer-supplier relationships. Table 4 below lists all the research questions used in the study, grouped when possible to represent trust, communication, co-operation, risk/reward sharing and commitment. Each question was evaluated on a five-point Likert scale, and the same ones were used to evaluate both buyer and supplier perceptions.

The research results suggest that both suppliers and buyers have similar perceptions of the key success factors in the customer-supplier partnership. In addition to some key-account management specific conclusions the results suggest that both buyers and sellers consider communication, trust and

commitment as important key success factors in a partnership relationship [6].

Table 4

Success factors in customer-supplier partnerships

Relationship component	Question (evaluated on a five-point scale) Scale: 1 =strongly disagree; 5=strongly agree)
Trust	The forming of close interpersonal relationships between key-account managers and their key-account customers is essential to the success of the long-term partnership.
	Customer-supplier partnerships usually result in a breach of contract.
	Key-account managers must have strong interpersonal skills, e.g., the right kind of personality and reliability.
	The key-account manager must be seen to have a high level of integrity in order to be trusted by the key-account customer.
Communication	It is important for key-account managers and their key-account customers to share confidential information concerning issues that may influence their operation.
Co-operation	Key-account managers must have the ability to identify problems and provide solutions within their key accounts.
	The key-account manager should have a sound knowledge of the customer's strategic direction.
	It is important for the key-account manager to anticipate the customer's future needs.
	The key-account manager must understand the customer's main concerns.
	The key-account managers must be familiar with who their key-account customers' competitors are, and what impact they have on their businesses.
	Key-account customers are usually aware that their main suppliers have created a unique way of managing the relationship between themselves and their key customers.
Risk/reward sharing	It is possible for the key-account customer to quantify the additional value-added services that the key-account manager provides to them.
Commitment	It is important for executive management (besides the key-account manager) to become involved in the customer's business.
	When necessary, key-account managers commit their company resources to their key customers, i.e. equipment, knowledge and personnel.
	Executive management plays an essential role in the customer-supplier relationship.
Others	Key-account managers must have well-honed negotiation skills
	Key-account customers understand the reason for the development of customer-supplier partnerships.
	Key-account managers are generally well suited to the appropriate key-account customer.
	Key-account managers have the necessary authority and mandate to deal with the customer's problems and to provide the appropriate solutions.
	Key-account customers are willing to accept additional value-added benefits (other than the cost of the product or service) when negotiating long-term contracts with their main suppliers.
	It is important for the key-account customer to understand the managerial practices and principles of key-account management.
	Key-account customers are only interested in what the product or service will cost when dealing with their main suppliers.

Conclusions. There are several elements in the characteristics of a developed partnership indicating that, in order to investigate very developed relationships, one must look beyond the dyadic relationship between the parties and also investigate the “inner workings” of the organizations involved in the relationship. The partners in a very developed partnership do their planning jointly and at multiple levels, even to the extent that they participate in each other's business planning. Communication occurs on all levels, and the parties “speak the same language”. Both parties are also highly committed to their partnership across functions and levels on both sides. The scope of inter-organizational partnership involves multiple functions, units and levels in both organizations. Inter-organizational partnerships enable and support successful supply chain management activities.

Partnership research has relied only on the other party's perception of the relationship, and therefore research on partnerships must have the partnership dyad as the minimum unit of analysis. In conclusion, from a methodological standpoint, partnership research should clearly move beyond inter-organizational dyadic relationships and to take into consideration the inter-functional and intra-

functional relationship perspectives.

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