## ISSN 1392-2785 ENGINEERING ECONOMICS. 2005. No 5 (45) THE ECONOMIC CONDITIONS OF ENTERPRISE FUNCTIONING

## The Development of Enterprises Network in a Region: Theoretical Aspects

# Eglė Kazlauskienė<sup>1</sup>, Vilma Tamulienė<sup>2</sup>, Raimonda Minkutė-Henrickson<sup>1</sup>

<sup>1</sup> Kauno technologijos universitetas K. Donelaičio g. 20, LT-44239, Kaunas

The article presents theoretical substantiation of the aspects enterprise network development: to prove, on the one hand, that peculiarities of enterprise network formation and functioning influence the possibilities of its development in a region, on the other hand, the development of enterprise network gives positive incentives for the region to renovate as well as it influences regional development.

Theoretical premises of enterprise network formation and development are related to the statements and attitudes developed in the theories of interorganisational relationship network and clusters. The discussed theories are not analysed completely, here are presented only the statements that allow best disclosing the theoretical premises of enterprise network formation and development in a region. Different definitions of enterprise network are formulated in the process of theory and conception analysis, causal coherences of enterprise network and regional development are considered.

The theoretical analysis has shown that the positive regional development can depend on interorganisational relationship, which, by increasing flexibility of territorial structure of enterprises, determine that partnership of enterprises (long-term cooperation) positively influences the development of the region when it is treated as the network of enterprises well accommodating to the needs of local community.

Keywords: network, enterprises network, interorganisational relationship, clusters, development of region.

### Introduction

Tendencies of post-industrial society development change the character of economics. The long-prevailed solution of regional problems, when the establishment of new economic objects and improvement of infrastructure conditions were considered the greatest contribution into region's development, becomes insufficient. The development of a region can be defined by the conditions of both life quality improvement, and economy growth. The level of the development of enterprises network in a region becomes of great importance from this viewpoint. The development of enterprises network, stressing its role in a post-industrial society, growth of productivity and competitiveness, makes influence upon the economic development of different levels of regions (district, city, etc.). The network of enterprises as a new form of enterprises interaction and

organisation of economic activity is the reply to globalisation tendencies, orientation to knowledge economy, development of services, and fast changes of the environment in the processes of regional development. In some territories the development of enterprises network is affected by favourable (stimulating), and in the others – by opponent (suppressive) environments; thus the conditions for development in various regions can be unequal.

From the standpoint of interorganisational relationship, the network of enterprises is treated not only as the system of enterprises. It forms on the basis of long-term relationship of partnership, cooperation among separate but related and influencing enterprises (suppliers, agents, competitors, etc.). Studies of scientific literature showed that the development of enterprises network is not theoretically and empirically analysed enough in the context of regional development; it involves wide complex of theoretical premises of interorganisational relationship.

The research goal – to distinguish basic theoretical premises, which enable the substantiation of the features of formation, functioning and development of enterprises network in the region from the standpoint of interorganisational intercourse.

Conceptual conditions of the formation and development of enterprises network, which determine peculiarities of interaction and enable answering the following **research aims**:

- the networks of enterprises based formation on interorganisational relationship form,
- differences between the networks of enterprises based on interorganisational relations and other forms of organisation of economic activity,
- the importance of the networks of enterprises based on interorganisational relations for economical and social development of regions,
- the definition of the network of enterprises formulation, referring to the conception of interorganisational relation network.

The research method: system, logic and comparative literature analysis of scientific conceptions.

# The Networks Based formation on Interorganisational Relationship Form

Z. Simsek, M.H. Lubatkin, S.W. Floyd (2003), B.R. Barringer, J.S.Harrison (2000), O. J. Sorrensen (1996);

<sup>&</sup>lt;sup>2</sup> VU Kauno humanitarinis fakultetas Muitinės g. 8, LT-44280, Kaunas

K.G. Provan (1993), G. Thompson, J. Frances, R. Levačic, J. Mitchell (1993), E. M. Bergman, G. Maier, F. Tödling (1993), H. Hakansson, J. Johanson (1989) analysed the interaction of participants of network of interorganisational relationship as well as their behaviour reasons in detail. According to them, the network of enterprises interorganisational relationship is based on the system of related enterprises of production, supply, distribution, use of goods and services. In this network the activity distribution determines interdependence of enterprises. The activity in the network is not coordinated according to the common plan formed in the hierarchy of an organisation or it is conditioned by price mechanism as in the models of free market, and it refers to partnership of enterprises.

In formation of the network of interorganisational relationship (Fig. 1), every enterprise chooses partners in the market freely, but, wishing to find external sources of resources and possibilities for realisation of goods, it has to cooperate with other enterprises, i.e. to make contacts. In order to consolidate the relationship and to develop them, a lot of time, efforts and resources is necessary, and

this does not allow simple and rapid change of partners (transactional costs). Thus every enterprise of the network directly communicates with clients, suppliers, partners, and sometimes competitors. It is evident that the position of the enterprise in the network is characterised by intensity of cooperation relationship (interaction) and the level of resource control, what determines its possibilities in the network as well as the ability to use them.

In answering the question how the networks of enterprises based on interorganisational relations form, it is necessary to single out the aspects of inter-adaptation of enterprises and formation of position in the network. In fact, intercourse of enterprises is reciprocal orientation of two enterprises. It means that one company is ready to cooperate with another and it believes that this party will do the same. Intercourse of cooperation forms in the process of resource exchange taking place between the partners. Partners' interests are an important part of the exchange process. Lasting interrelationship can appear when the partners perceive certain complexity and heterogeneity of the exchange (G. Thompson, J. Frances, R. Levačic, J. Mitchell (1993)).

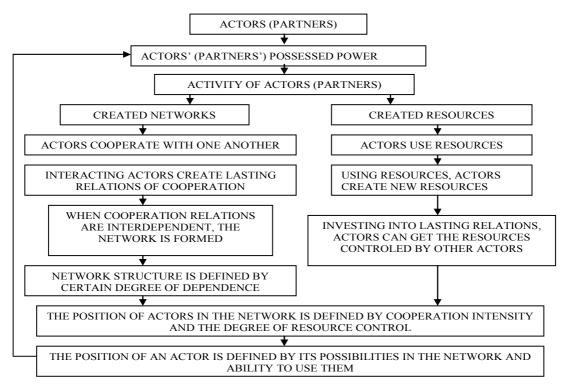


Figure. Formation of intergonisational relationship network (O.J. Sorrensen, 1996)

Onetime exchange is a constituent of the formation of the interorganisational relation network of enterprise, when partners gradually develop mutual *confidence*. Business exchange between a supplier and a client involves the notion of social exchange too. Social exchange means that a human element is important for long-term cooperation relationship, though technical, logistics, administrative and time elements are not devalued. Exchange process is the process not only of learning but also of *adaptation*. The exchange usually causes a lot of problems, when partners do not fit each other, or a part of efforts are wasted for eliminating incongruities. The ad-

aptation takes place in most levels. Enterprises can adjust to each other technically, modifying the processes of product or service providing. They can adjust in logistics, correcting the level of stock or developing common systems of delivery. Some enterprises adapt administratively, changing systems of planning or timetables. They can also adapt financially, doing payments in special ways. Finally, some enterprises adapt in the field of knowledge and information. Eventually interaction processes induce the adaptation of partners' knowledge and attitudes in respect of each other, i.e. *inter-orientation forms*. The main feature of reciprocal orientation is con-

fidence and mutual cognition, which can involve resources, strategies and needs of partners as well as form the possibilities of the enterprise that determine the position in the network. The position defines relations of the enterprise with other enterprises; it is the result of earlier activity of the enterprise (as well as of other enterprises) and creates the basis for further development possibilities of the enterprise in the network. Referring to F. Janszen (2000), it is possible to state that position of a company depends on how the enterprise controls internal and external resources as well as it is able to turn them into products successfully. Resource control is closely related to the position of a company in the network. This means that resource control and ability to turn them into products of higher value (to give them surplus value) determines enterprise's power and position in the network, what, in its turn, influences the possibility to control resources. As time and efforts are necessary for consolidation of the position, and the position determines possibilities and limitations of strategic development of the enterprise in the future, it is possible to treat the position of the enterprise as partly controlled non-material assets (resources) of the market.

It is possible to state that enterprises are the parts of the networks based on interorganisational relationship, which allows transforming resources into service products more effectively. The relative position that an enterprise takes in the network can provide certain advantage in respect of other interacting enterprises due to more operative access to new information or knowledge, new materials, services or better financing sources. However the network can limit the mobility of an enterprise, as network partners anticipate certain behaviour. The space of manoeuvres, which the enterprise possesses, depends on its power or influence upon the network partners. Therefore the analysis of interorganisational relationship network would involve not only the identification of partners, determination of critical parameters of their interrelationship (e.g., resource exchange, cooperation duration), but also the research of participants trust, power in respect of other participants or influence upon them.

## Differences between the networks of enterprises based on interorganisational relations and other forms of organisation of economic activity

The main question is how do the networks of enterprises based on interorganisational relations differ from other forms of organisation of economic activity? (What are peculiarities of their functioning?) Analysing the development of interorganisational relationship networks from historical retrospection, R. S. Achrol and P. Kotler (1999) drew the conclusion that, when industrial revolution took place, hierarchy-related enterprises changed independent enterprises freely functioning in the market. However, when the technologies used for releasing production (or providing services) became very complicated, the expenditure of the control of all market fields became too large for them. In the knowledge and progress-based environment large, vertically integrated, hierarchy-related enterprises became ineffective, too dependent on different specialised structures using both progressive, and non-progressive technologies. W. Powell (1991) states that the network structure as alternative postbueraucratic form of business organisation is between the market and hierarchy.

The market functions as coordinative mechanism, which gives rationality and consistency for the actions of individuals or enterprises. According to B. A. Toffler, J. Imber (1994), the market – is an economic system, in which supply and demand forces of certain goods or service manifest. It consists of clients, suppliers, distribution channels, mechanisms of price-fixing and transaction-making, it allows choosing, gives a possibility to profit by the occasion, to warrant fast and simple communication.

In the classical market, the information is got freely, potential buyers or sellers easily enter the market and leave it, it is proceeded from one transaction to another without great outcomes. However, when changes become frequent and complicated, the costs of transaction management and control increase, determining the need for structural changes and new forms of activity organisation.

Provan G.K. (1993) states that in the hierarchy-based business, individual employees work according to administrative procedures, their positions are determined by employees of higher managerial level. The essence of management of these enterprises – is to rationally distribute tasks, to determine positions of employees, to create reliable system of orders. As tasks become very specialised, the activity is also very related. Thus a large vertically integrated enterprise distinguishes in routine, personal expectations and detailed specialised knowledge. High-volume, repeated-operation needs require constant attention of managerial group. In such a case, the advantage of hierarchical organisation is a) its reliability, i.e. the ability to produce plenty of goods of uniform quality and to provide a lot of services; and b) accountability, i.e. the ability to analyse whether the resources were optimally used.

Thus clear functions of subdivisions, clear structure of subordination, detailed mechanisms of messages, formal procedures of decision-making are characteristic for hierarchical business organisation; it is especially fit to mass production and distribution. But when such business faces big fluctuations of the need (demand) as well as unexpected changes, it becomes ineffective.

According to M.A.Lyles, T. Saxton, K.Watson (2004), O. Williamson (1995), networks as the form of business organisation is an intermedium between the market and institutes of organizational hierarchy. From this standpoint, the influence of institutionalism aspects upon the formation of interorganisational relationship enterprise network should be emphasised. It should be stressed that the institutionalism spans very different conceptions. W. Parsons (2001) distinguishes the economic institutionalism, which emerged from theories of a firm and is applied mostly in economical analysis. Inter alia, the theory of transaction costs economics represents it. According to it, the decision to buy or sell something, i.e. to take part in the market, possesses its costs. For example, one must collect necessary information; find buyers (clients) or sellers (suppliers); negotiate price and conditions with them; make contracts (ex ante costs) and supervise that they would be fulfilled (ex post costs). In respect of all these approaches it is attempted to diminish uncertainty and increase the control of their transactions. O. Williamson assumes that in the firm's life there is a moment when transaction costs of trade with external firms become too big and can be decreased by forming networks of interorganisational relationship. From this standpoint, the networks of interorganisational relationship of enterprises/organisations, referring to W. Powell (1991), S. P. Robbins, R. Stuard-Kotze (1990), are possible to be called a new form of organisa-

tion of economic activity.

The activity based on market mechanism, hierarchy and network structures does not in fact involve the analysis of all economic relations, but it allows substantiating the reasons of formation of complicated relations, as well as business organisation of a different type in the modern world. Table 1 presents basic peculiarities of expression of business based on market, hierarchy and network. In market transactions the exchange normative basics of transactions and ways of conflict resolution are conditioned by law and order sanctions.

Table 1

Stylised comparison of forms of economic organization

**Forms** Key features Market Hierarchy Network Normative basis Contract – property rights Employment relationship Complementary strengths Means of communication Prices Routines Relational Haggling – resort to courts for Norm of reciprocity -Administrative fiat -supervision Methods of conflict resolution reputational concerns enforcement Low Degree of flexibility High Medium Amount of commitment among Low Medium to high Medium to high narties Open -ended, Tone or climate Precision and/or suspicion Formal, bureaucratic mutual benefits Dependent Actor preferences or choices Independent Interdependent

Source: THOMPSON G., FRANCES J., LEVAČIC R., MITCHELL J. Markets Hierarchies& Networks edited by SAGE Publications London. Newbury Park. New Delhi 1993. 269 p.

In the network the transactions are based on the norms accepted by all participants, but necessarily juridical. In the market the exchangeable value of goods (price) is more important than the relation between transaction parties. Meanwhile in the networks the very relations are treated as if they were consumer goods. In the formal hierarchical structure of management communication is based on working agreements, and relationship is formed on the basis of common position.

Participation in the networks most frequently gives enterprises more stability than market transactions, and this is especially important in the context of R&D and innovations. On the other hand, networks give more flexibility than internal organisational hierarchy can give. Consequently, participation in networks betters the ability to accept innovations and to successfully adjust to changing conditions of the environment.

In the market business is organised seeking to make appropriate transactions under fast changing conditions. Commitments and reciprocal trust are the most important when exchanging goods (resources) in the networks. In the hierarchy, communication or necessary changes can be limited or completely eliminated due to personal interests of managers. Here internal communication takes place among parties, which got some experience, know

each other well, as well as possess specific knowledge necessary for a company. Thus for the hierarchy-related companies the interdependence is characteristic, alike network organisations.

Referring to W. Parsons (2001), it should be emphasised that the forms of activity organisation cannot be resolved into market, hierarchical and network organisations, among them there are no strict margins, and any organisation involves all the elements. According to the author, supply systems – are perceived as the mix of all three forms of activity, they can be presented as trinomial ratio, the content of which changes in the time and space. As the mix is not uniform in all organisations, the goal is to identify the caharacter of the mix (activity orientation), but not to put organisations on to shelves.

## The importance of the networks of enterprises based on interorganisational relations for economical and social development of regions

What importance do the networks of enterprises based on interorganisational relations have for economical and social development of regions? In the works of Z. Simsek, M.H. Lubatkin, S.W. Floyd (2003), G.G. Dess, A.Gupta, J.F. Hennart, Ch.W. Hill (1995), E. M. Berg-

man, G. Maier, F. Tödling (1993) the conception of the network of interorganisational relations is developed in the context of regional development. According to the above-mentioned authors, consolidation of enterprises of different activity nature into the network involves development process at local, national and/or international level. The researchers assume that in the process of regional development cultural, technological, institutional, political and resource flows' exchange take place in the networks of enterprises.

Regional development, to which it is characteristic that, when new forms of economic activity organisation (systems, network) are created, the region changes qualitatively, can be related to the development of the network of enterprises. The participation in the network can become strong and critical factor and incentive of development, as it allows both certain network of enterprises, and the region, where it is situated, to mobilize resources, to get important information and knowledge. In this case cooperation of participants, inter-compatibility of mutual and proprietary interests of participants, as well as network accessibility (attainability) and other features of its expression, as well as advantages allow orienting to more flexible model of regional development.

It is possible to state that networks of interorganisational relationship become the prevailing form of economical activity organisation, enabling enterprises of the region to take certain position in the enterprises' network of the same or different sector (activity nature), on the one hand, keeping certain part of one's activity functions, on the other hand, transferring some functions (e.g., supply, distribution, support, finance management) to other enterprises. In this way independent specialised but relation-related enterprises, which provide functional services - frequently even to the sectors of the same group of services, - emerge. It is possible to distinguish (1) expression features and (2) advantages of networks of enterprises, which have a very great importance for renewal and development of regions in the future. (1) From the standpoint of interorganisational relationship, the synergy effect emerging due to surplus value, flows of easier obtained, more effectively distributed and used resources both in the system (network of enterprises), and beyond its borders (networks of regions, groups of enterprises' networks), is characteristic to the network as adaptive business system. (2) Lasting economic benefit of the network manifests in diminishing large transaction costs. Participation in networks, relationship and cooperation with other enterprises helps to overcome limitations of localisation (problems of territory), gives the enterprises in the region more stability and flexibility.

Having discussed the most important theoretical premises of formation and development of enterprises' network in the context of the conception of interorganisational relations, it is evident that the network of enterprises could be defined as follows: the network of enterprises is an adaptive system, which emerges when long-term cooperation relationship is made between enterprises in order to avoid transaction costs related to market uncertainty and inflexibility of hierarchy.

The conception of interorganisational relationship of enterprises network as the object of scientific analysis is particularly important at the juncture of economics and management sciences; it has recently been developing, it is closely related to other theories, which refers to it and expands it by revealing the particularity of groups of enterprises and impact upon regional development disclosing the particularity of the groups of enterprises related by the network in the territory and influence upon regional development.

Clusters and their importance for the development of enterprise network. Analysing the role of enterprises' network formation and development for the development of regions from the viewpoint of interorganisational relationship, the scientific contribution of D.J. Ketchen, Ch.C. Snow, V.L. Hoover (2004), M. Porter, S. Chowdhury, D. Keeble and F. Wilkinson, R. Waters and H. Lawton Smith, etc., to the conception of the network of interorganisational relationship, which was extended considering territorial principles of activity organisation, should be emphasised. R. Waters and H. Lawton Smith (2002) assume that the importance of territory for the spread of innovations and learning of organisations/enterprises is very great when knowledge and other resources are concentrated in certain localities.

S. Chowdhury et al. (2000) think that networks of interorganisational relationship (the author gives the term *creative network*) become geographical networks when such features of the network as creativity and innovations, certain geographical localisation of the network are stressed.

One of the forms of the network – cluster – exists in geographical borders of the region where close location of the enterprises allows creating of the forms of appropriate interaction and increases the frequency of enterprise's contacts as well as cohesion. According to D. Keeble and F. Wilkinson (1999), an enterprise can be a partner of the other enterprise in one cluster but a competitor – in another cluster. In other words, a lot of complicated and different types of interrelationship can together exist. As M. Porter (2001) states, in a certain territory clusters – groups of enterprises related by networks - are found in branches, to which high technologies are characteristic, as well as in such traditional branches as industry or the field of providing services, both in large, and in local business fields, for example restaurant business. They exist in large-scale and small-scale economics, urban and rural localities as well as different geographical levels. Borders of clusters seldom enough correspond classification standards of the branches. Due to the reason that groups of these enterprises are often attributed to different traditional categories of branches or services, important combinations of groups can be recognisable wrongly or not recognisable at all. The borders of clusters can change depending on the emergence of new enterprises or branches, contraction or reduction of present branches, as well as on development and changes of local organisations.

Why is it better to look at economics through clusters but not through grouping of traditional branches and sectors such as industry and service enterprises? It is because:

*Firstly*, groups of enterprises related by networks better than branches maintain important interrelationship, in-

terchange technologies, skills, information, market experience, as well as understand the needs of client enterprises;

Secondly, the development depends on productivity, the factors influencing, which do exists and are improved in a certain locality. Thus the aim is to increase productivity of all branches, to heighten welfare both directly, and indirectly, as the increase of the productivity in one field of activity raises the productivity of all other fields of activity. Consequently regional development depends on the productivity of the field, the enterprises of which function in it.

Thirdly, competitive advantages of the group of enterprises related by the network are valid in all fields. Recently the nature of agglomeration economics has changed very much: it became more important at the level of the group of enterprises related by networks in a certain territory, but not only in the branch narrowly defined.

Contemporary scientific literature pays a lot of attention to competitiveness. The competitiveness is defined as ability to produce goods or services, meeting market requirements and warranting the growth of country's and its population's welfare (F.Bradley, 1995), in addition, as ability of enterprises, regions and nations to keep high level of income and employment under the conditions of international competition (H. Wienert, 1997). It is possible to consider business competitiveness from the positions of both a particular enterprise, and economical branches or country economics (H. Hughes, 1989), as well as enterprises network. These levels are only relatively independent, as their internal and external relationship is close enough. Thus high level of competitiveness of enterprise, economy field or national economics can be

reached by developing networks of interorganisational relationship in a specific territory. According to M. Porter (2001), this theory of development, on one hand, analyses how *competitiveness of enterprises and regions* is influenced by close position of enterprises/organisations related by economical relationship in particular geographical zone, on the other hand, it states that increasing trust, benefit and self-discipline due to constant interaction and influence of mutual understanding in a region or city evidently contributes to the interaction of the group of enterprises related by networks, increases *productivity*, induces innovations and finally emergence of new types of business.

The theory of interorganisational relationship network can contribute to the understanding how clusters function in the territory and how their activity can become more productive. Clusters give new possibilities to investigate the mechanisms, by means of which the networks, social capital and activity of the society influence competition and market. Thus the theory of clusters helps to reveal the origins of network structure, the essence of the activity in the relationship- and territory-based network as well as the interface between network characteristics and results of its functioning.

From this standpoint the network of enterprises is the structure increasing the competitiveness of the region and productivity of enterprises, it formed having enterprises and their groups being situated (not necessarily on the basis of economical branches) in the territory of a particular region and/or on the basis long-term cooperation relation beyond its borders. It should be stressed that in every theory of different topic more or less different features of formation, functioning, development and influence upon the region prevail (Table 2).

Table 2

The features defining formation, functioning,
development of enterprises network and influence upon regional development

Theories and conceptions	OF ENTERPRISES NETWORK BY THE STANDPOINT OF INTERORGANISATIONAL RELATIONSHIP		
	Formation and functioning based on	Development based on	Role in a region manifests by
Network conception	<ul> <li>lasting relations of enterprise cooperation in order to avoid transactional costs related to market indetermination and hierarchy inflexibility</li> <li>peculiarities of adaptation and position of interacting enterprises</li> </ul>	changes of interaction (relationship) intensity     advantages extended by cooperation	incentives for regional development     flows of easier acquired, effectively distributed and used resources
Theory of clusters	geographical concentration of enterprises, which not only compete, but also cooperate	use of knowledge and resources focused in certain localities	more flexible spatial decisions     increase of productivity and region competitiveness     development of new businesses

## **Conclusions**

Occupying insufficiently defined and explored niche in the system of economical, regional and managerial sciences, the conception of the development of enterprises' network unites wide complex of theoretical premises of interorganisational relationship.

The conception of interorganisational relationship, which emerged when new forms of activity organisation were formed, enterprises and their interaction mecha-

nisms, interrelationship and possibilities of selforganisation of business systems were actively developing, allows to found in principle new tendencies of network formation of modern enterprises based on relations in processes of regional development.

Referring to the *theory of clusters* it is possible to state that the competitiveness of enterprises and regions is influenced by the close position of enterprises/organisations related by economical relations in a particular territory. Increasing trust, profit due to reciprocal understanding and influence of lasting relations of cooperation in the region or city influences the interaction the group of enterprises related by networks and the development of enterprises network in the region. This theory contributes to revealing the essence of activity in the network based on interorganisational relationship and territory as well as the coherence between the network characteristics and such results of its functioning as productivity and competitiveness.

Thus positive regional development can depend on interorganisational relationship, which, by increasing flexibility of territorial structure of enterprises, determine that partnership of enterprises (long-term cooperation) positively influences the development of the region when it is treated as the network of enterprises well accommodating to the needs of local community. The networks of enterprises based on the partnership stimulate the activity not only of the enterprises but also of most institutions supporting business and related to the enterprises, oriented to certain sector or geographical place of the activity, having the possibility to form the market as well as provide products and services.

## References

- Barringer, B.R. Walking a Tightrope: Creating Value Through Interorganizational Relationships / B.R.Barringer, J.S.Harrison // Journal of Management, 2000, Vol.26, p. 367–403.
- Bergman, E.M. Regions Reconsidered Economic Networks, Innovation, and Local Development in Industrialized Countries / E.M.Bergman, G. Majer, F.Mansell. F.Todling, 1993. 312 p.
- Bradley, F. International Marketing Strategy. London: Prentice Hall, 1995. 650 p.
- Chowdhur, Y.S. Management 21C / Y.S. Chowdhur, P. Senge, K. Kaufer, R. Kanter // Financial Times. Prentice Hall, 2000, 448 p.
- Dacin, T.M. The Embeddedness of Organizations: Dialogue and Directions / T.M. Dacin, M.J.Ventresca, B.D.Beal // Journal of Management, 1999, Vol.25, p. 317–356.
- Dess, G.G. Conducting and Integrating Strategy Research at the International, Corporate and Business Levels: Issues and Directions / G.G.Dess, A.Gupta, J.F.Hennart, Ch.W.Hill // Journal of Management, 1995, Vol. 21, p.357–393.
- Hakansson, H. A model of industrial networks / H.Hakansson, J.Johanson / In B.Axelsson, G.Easton. Industrial networks: a new of reality. London: Routledge, 1992, p. 28–36. Hughes, H.L. Regional Development and Planning for the 21<sup>st</sup> Century. London, 1988. 221 p.
- Janszen, F. The Age of Innivitation. Financial Times Prentice Hall, 2000. 308 p.
- Keeble, D. Collective learning and knowledge development in the evolution of regional clusters of high technology SMES in Europe / D.Keeble, F.Wilkinson // Regional Studies, 1999, Vol.33, 295 p.
- Ketchen, D.J. Research on Competitive Dynamics: Recent Accomplishments and Future Challenges / D.J.Ketchen, Ch.C.Snow, V.L.Hoover // Journal of Management, 2004, Vol. 30, p.779–804.
- 11. Kotler, Ph. Marketing in the Network Economy / Ph.Kotler, R.Achrol // Journal of Marketing, 1999, Special Issue, 286 p.
- 12. Lyles, M.A. Venture Survival in a Transitional Economy / M.A.

- Lyles, T.Saxton, K.Watson // Journal of Management, 2004, Vol. 30, p. 351–375.
- McElroy, J.C. Attribution Theories of Leadership and Network Analysis / J.C.McElroy, C.B.Shrader // Journal of Management, 1986, Vol.12, p. 351–362.
- Parsons, W. Viešoji politika: politikos analizės teorijos ir praktikos įvadas. Vilnius: Eugrimas, 2001. 607 p.
- Porter, M. Konkurencija. Sankt Peterburg, Moskva, Kijev: Izdatelskij dom, Viljams, 2001. 495 p.
- Provan, K.G. Embeddedness, Interdependence and Opportunism in Organizational Supplier-Buyer Networks // Journal of Management, 1993, Vol. 19, p.841–856.
- Powell, W. Neither Market nor Hierarchy: Network Forms of Organization / In G.Thompson G.Frances, R.Levacis, J.Mitchell. Markets Hierarchies & Networks. SAGE Publications, London: Newbury Park, New Delhi, 1993. 244 p.
- Robbins, S.P. Mangement / S.P.Robbins, R.Stuard-Kotze. Scarborough: Prentice Hall Canada, Inc., 1990. 796 p.
- Simsek, Z. Inter-Firm Networks and Entrepreneurial Behavior: A Structural Embeddedness Perspective / Z.Simsek, M.H. Lubatkin, W. Floyd // Journal of Management, 2003, Vol. 29, p. 427–442.
- Sorensen, O.J. The Network Theory: an Introduction to Its Conceptual World // International business economics, 1996, Vol. 8, p.1–16.
- Thompson, G. Markets Hierarchies & Networks / G.Thompson, J.Frances, R.Levacic, J.Mitchell. SAGE Publications, London: Newbury Park, New Delhi, 1993. 244 p.
- Toffler, B.A. Dictionary of Marketing Terms / B.A. Toffler, J.Imber. 2nd ed. Barron's Educational Series, Inc., 1994. 579 p.
- Waters, R. Regional Development Agencies and Local Economic Development: Scale and Competitiveness in High-technology Oxfordshire and Cambridgeshire / R.Waters, L.H.Smith // European Planning Studies, 2002, Vol.10, No 5, p.633–648.
- Weinert, H. Regulation and Industrial Competetiveness: a Perspective for Regulatory Reform. OECD, 1997.
- Williamson, O.E. Hierarchies, Markets and Power in the Economy: An Economic Perspective // Industrial and Corporate Change, 1995, Vol. 4, No 1, p.21–49.
- Williamson, O.E. Tranzaction Cost Economics and Organization Theory // Industrial and Corporate Change, 1993, Vol. 2, issue 2, p.107–156

Eglė Kazlauskienė, Vilma Tamulienė, Raimonda Minkutė-Henrickson

#### Įmonių tinklo plėtros regione teoriniai aspektai

#### Santrauka

Straipsnyje teoriškai pagrindžiami įmonių tinklo plėtros aspektai regione: siekiama irodyti, kad, viena vertus, imoniu tinklo formavimosi bei funkcionavimo savitumai daro įtaką tinklo plėtros regione galimybėms, kita vertus, įmonių tinklo plėtra teikia pozityvių paskatų regionui atsinaujinti ir veikia regiono plėtrą. Remiantis mokslinės literatūros studijomis, atskleidžiamas skirtingas įmonių tinklo ir jo plėtros supratimas. Įmonių tinklo, kaip ekonominės veiklos organizavimo formos, plėtra sąlygojama lengviau įgyjamų, efektyviau pasiskirstančių ir panaudojamų išteklių srautų, imonių sąveikos, lemiančios kompleksą pozityvių įmonių tarporganizacinių ryšių raiškos požymių, regione pokyčių. Įmonių tinklas, kaip nauja įmonių sąveikos bei ekonominės veiklos organizavimo forma, yra atsakas į globalizacijos tendencijas, orientaciją į žinių ekonomiką, paslaugų plėtra, sparčius aplinkos pokyčius regionų raidos procesuose. Tarporganizacinių ryšių požiūriu įmonių tinklas traktuojamas ne tik kaip įmonių visuma. Jis susiformuoja ilgalaikių partnerystės, bendradarbiavimo ryšių tarp atskirų, tačiau susijusių ir viena kitai darančių įtaką, įmonių (tiekėjų, tarpininkų, konkurentų) pagrindu. Įmonių tinklo formavimosi priežastys, jo raiškos požymiai ir plėtotės kryptys mokslinio tyrimo teoriniu lygmeniu tampa svarbiu tyrimo objektu. Mokslinės literatūros studijos (Simsek, Lubatkin, Floyd, 2003; Barringer, Harrison, 2000; Sorrensen, 1996; Dess, Gupta, Hennart, Hill, 1995; Provan, 1993; Thompson, Frances, Levačic, Mitchell, 1993; Bergman, Maier, Tödling, 1993; Hakansson, Johanson, 1989 ir kt.) parodė, kad įmonių tinklo plėtra regiono raidos kontekste nepakankamai teoriškai ištirta ir apima platų tarporganizacinių ryšių teorinių prielaidų kompleksą. Tai leidžia suformuluoti mokslinę problemą -

kokie tarporganizaciniais ryšiais pagrįstų įmonių tinklų formavimosi bei funkcionavimo bruožai veikia regionų pozityvią raidą.

**Tyrimo tikslas** – išskirti pagrindines teorines prielaidas, leidžiančias pagrįsti įmonių tinklo formavimosi, funkcionavimo ir plėtros regione bruožus tarporganizacinių ryšių požiūriu.

**Tyrimo metodai** – mokslinėje literatūroje paskelbtų koncepcijų sisteminė, loginė ir lyginamoji analizė.

Tarporganizacinių ryšių tinklo koncepcija yra esminė ir turinti didžiausią įtaką įmonių tinklo plėtros teoriniam pagrindimui. Pabrėžiamos tos įmonių tinklo formavimosi ir plėtros konceptualiosios sąlygos, kurios nulemia įmonių tinklo dalyvių sąveikos ypatumus ir leidžia suformuluoti šiuos **tyrimo uždavinius**: (1) atskleisti tarporganizaciniais ryšiais grįstų įmonių tinklų formavimąsi (formavimosi ypatumus); (2) apibrėžti tarporganizaciniais ryšiais grįstų įmonių tinklų ir kitų ekonominės veiklos organizavimo formų skirtumus; (3) aptarti tarporganizaciniais ryšiais grįstų įmonių tinklų reikšmę ekonominei bei socialinei regionų plėtrai; (4) vadovaujantis tarporganizacinių ryšių tinklo koncepcija, suformuluoti imoniu tinklo definicija.

Tarporganizaciniais ryšiais grįstų įmonių tinklų formavimasis. Z. Simsek, M.H. Lubatkin, S.W. Floyd, 2003; B.R. Barringer, J.S.Harrison, 2000; O. J. Sorrensen, 1996; K.G. Provan, 1993; G. Thompson, J. Frances, R. Levačic, J. Mitchell, 1993; E. M. Bergman, G. Maier, F. Tödling, 1993; H. Hakansson, J. Johanson, 1989 ir kt. manymu, įmonių tarpusavio ryšių tinklas yra pagrįstas susijusių gamybos, tiekimo, paskirstymo, prekių bei paslaugų naudojimo įmonių sistema. Veiklos pasiskirstymas šiame tinkle lemia įmonių tarpusavio priklausomybę. Veikla tinkle remiasi įmonių partneryste, bendradarbiavimo santykiais, išteklių mainais, pasitikėjimu. Verslo mainai tarp tiekėjo ir kliento apima ir socialinių mainų samprata. Socialiniai mainai reiškia, kad ilgalaikiams bendradarbiavimo santykiams svarbu žmogiškasis elementas, nors nenuvertinami techniniai, logistikos, administraciniai bei laiko elementai. Mainų procesas yra ne vien tik mokymosi, bet ir adaptacijos procesas. Sąveikos procesai skatina partnerių žinių bei požiūrių adaptaciją vieno su kitu, t. y. susidaro abipusė orientacija. Pagrindinis abipusės orientacijos bruožas yra pasitikėjimas bei abipusis pažinimas, kuris gali apimti partnerių išteklius, strategijas, poreikius bei formuoti įmonės galimybes lemiančią padėtį tinkle. Padėtis apibūdina įmonės santykius su kitomis įmonėmis; yra įmonės (taip pat ir kitų įmonių) ankstesnės veiklos tinkle rezultatas bei sudaro pagrindą toliau plėtoti įmonės galimybes tinkle. Kadangi padėčiai įtvirtinti reikia laiko bei pastangų, o esama padėtis lemia įmonės strateginės plėtros galimybes ir apribojimus ateityje, įmonės padėtį tinkle galima traktuoti kaip iš dalies kontroliuojamus nematerialiuosius rinkos aktyvus (išteklius). Įmonės yra tarporganizaciniais ryšiais grįstų tinklų dalys, kurios leidžia efektyviau transformuoti išteklius į paslaugų produktus. Santykinė įmonės padėtis tinkle gali suteikti pranašumo prieš kitas sąveikaujančias įmones dėl operatyvesnio priėjimo prie naujos informacijos ar žinių, naujų medžiagų, paslaugų ar geresnių finansavimo šaltinių. Tačiau tinklas gali riboti įmonės manevringumą, nes tinklo partneriai tikisi tam tikros elgsenos. Įmonės manevrų erdvė priklauso nuo jos galios arba įtakos tinklo partneriams. Todėl tarporganizacinių ryšių tinklo analizė apimtų ne tik partnerių identifikavimą, jų tarpusavio santykių kritinių parametrų (pvz., išteklių mainų, bendradarbiavimo trukmės) nustatymą, bet ir dalyvių pasitikėjimo, galios kitų dalyvių atžvilgiu ar įtakos jiems tyrimą.

Tarporganizaciniais ryšiais grįstų įmonių tinklų ir kitų ekonominės veiklos organizavimo formų skirtumai. Tarporganizaciniais ryšiais grįsti įmonių tinklai, anot O. Williamson (1995), kaip verslo organizavimo forma, yra tarpinė tarp rinkos ir organizacinės hierarchijos. Pagrindiniai skirtumai sietini su sandorių specifika, įmonių pastovumu, lankstumu bei pasitikėjimu. Rinkos sandoriuose mainų normatyviniai susitarimų pagrindai ir konfliktų sprendimo būdai sąlygojami teisėtvarkos sankcijų. Tinkle sandoriai paremti visiems dalyviams priimtinomis, nebūtinai teisinėmis normomis. Rinkoje daug svarbesnė prekių mainomoji vertė (kaina) nei ryšys tarp sandorio dalyvių. Tuo tarpu tinkluose ir patys ryšiai dažniausiai traktuojami taip, lyg būtų plačiai vartojamos prekės. Formalioje hierarchinėje valdymo struktūroje komunikacija yra pagrįsta darbiniais susitarimais, o ryšiai formuojami bendros pozicijos pagrindu. Dalyvavimas tinkluose įmonėms dažniausiai suteikia daugiau

pastovumo nei rinkos sandoriai, o tai ypač svarbu tyrimų ir plėtros (R&D) bei inovacijų kontekste. Kita vertus, tinklai teikia daugiau lankstumo nei jo gali suteikti vidinė organizacinė hierarchija. Todėl dalyvavimas tinkluose pagerina gebėjimą priimti inovacijas bei sėkmingai prisitaikyti prie kintančių aplinkos sąlygų. Rinkoje verslas organizuotas siekiant sudaryti tinkamus sandorius sparčiai kintančiomis sąlygomis. Tinkluose keičiantis prekėmis (ištekliais) svarbiausia yra įsipareigojimai ir tarpusavio pasitikėjimas. Hierarchijoje komunikacija ar reiaklingi pokyčiai gali būti ribojami ar visai atmetami dėl asmeninių vadovų interesų. Vidinė komunikacija čia vyksta tarp šalių, kurios yra įgijusios patirties, gerai viena kitą pažįsta bei turi specifinių įmonė reikalingų žinių. Taigi hierarchija susijusioms įmonėms būdinga stipri tarpusavio priklausomybė, panašiai kaip ir tinklo organizacijose.

Tarporganizaciniais ryšiais grįstų įmonių tinklų reikšmė ekonominei bei socialinei regionų plėtrai. Pasak E. M. Bergman, G. Maier, F. Tödling (1993), regiono plėtros procese įmonių tinkluose vyksta kultūriniai, technologiniai, instituciniai, politiniai bei išteklių srautų mainai. Regiono plėtra, kuriai būdinga tai, kad, kuriantis naujoms ekonominės veiklos organizavimo formoms (sistemoms, tinklui), regionas kokybiškai persitvarko, gali būti susijusi su imonių tinklo plėtojimusi. Dalyvavimas tinkle gali tapti stipriu ir lemiamu plėtros veiksniu ir paskata, nes leidžia tiek tam tikram įmonių tinklui, tiek regionui, kuriame jis yra, mobilizuoti išteklius, gauti svarbios informacijos bei žinių. Šiuo atveju dalyvių bendradarbiavimas, bendrų ir savininkiškų dalyvių interesų tarpusavio suderinamumas, taip pat tinklo prieinamumas (pasiekiamumas) bei kiti jo raiškos požymiai bei pranašumai leidžia orientuotis į kur kas lankstesnį regiono plėtros modelį. Tarporganizacinių ryšių tinklai tampa vyraujančia ekonominės veiklos organizavimo forma, leidžiančia regiono įmonėms užimti tam tikrą padėtį to paties ar skirtingo sektoriaus (veiklos pobūdžio) įmonių tinkle, viena vertus, išlaikant tam tikrą dalį savo veiklos funkcijų, kita vertus, perleidžiant kai kurias funkcijas (pvz., tiekimo, paskirstymo, rėmimo, finansų valdymo) kitoms įmonėms. Taip atsiranda nepriklausomos specializuotos, bet ryšiais susijusios imonės, kurios teikia funkcines paslaugas dažnai netgi tos pačios paslaugų grupės sektoriams.

Aptarus svarbiausias įmonių tinklo formavimosi bei plėtros teorines prielaidas tarporganizacinių ryšių koncepcijos kontekste, įmonių tinklas, manytume, galėtų būti apibrėžtas taip: įmonių tinklas yra adaptyvi sistema, susidaranti tarp įmonių užsimezgus ilgalaikiams bendradarbiavimo ryšiams, siekiant išvengti su rinkos neapibrėžtumu ir hierarchijos nelankstumu susijusių transakcinių kaštų.

Užimdama nepakankamai apibrėžtą ir ištirtą nišą ekonomikos, regionų ir vadybos mokslų sistemoje, įmonių tinklo plėtros koncepcija apima platų tarporganizacinių ryšių teorinių prielaidų kompleksą. Lyginamoji tarporganizacinių ryšių tinklų ir įmonių grupių (klasterių) teorijų ir koncepcijų analizė leidžia teigti, kad jose vyrauja daugialypis ir įvairiapusiškas įmonių tinklo supratimas. Įmonių tinklo samprata skirtingų teorijų ir koncepcijų interpretacijoje leidžia išskirti esminius įmonių tinklo požymius, kaip tam tikromis koncentracijos teritorijoje charakteristikomis; dideliu sąveikaujančių įmonių nepriklausomybės ir kooperacijos lygiu; įmonių tinklas yra veikiamas aplinkos ir organizacinių pokyčių; veikia kaip tarp skirtingo ir to paties veiklos pobūdžio (tiekėjų, tarpininkų, konkurentų) įmonių ilgalaikių bendradarbiavimo ryšių pagrindu; didina įmonių regione konkurencingumą bei produktyvumą. Įmonių tinklo, kaip ekonominės veiklos organizavimo formos, plėtra sąlygojama lengviau įgyjamų, efektyviau pasiskirstančių ir panaudojamų išteklių srautų, įmonių sąveikos, lemiančios kompleksą pozityvių įmonių tarporganizacinių ryšių raiškos požymių, regione pokyčiais. Taigi pozityvi regionų raida gali priklausyti nuo tarporganizacinių ryšių, kurie, didindami teritorinės įmonių struktūros lankstumą, lemia tai, jog įmonių partnerystė (ilgalaikis bendradarbiavimas), kai ji traktuojama kaip įmonių tinklas, gerai prisiderinantis prie vietinės bendruomenės poreikių, teigiamai veikia regiono raidą. Tokia partneryste grįsti įmonių tinklai skatina ne tik pačių įmonių, bet ir daugelio verslą remiančių ir su pačiomis įmonėmis susijusių institucijų, orientuotų į tam tikrą veiklos sektorių ar geografinę vietą, turinčių galimybę formuoti rinką bei teikti produktus ir paslaugas, veiklą.

Raktažodžiai: tinklas, įmonių tinklas, tarporganizaciniai santykiai, klasteriai, regiono plėtra.

The article has been reviewed.

Received in October, 2005; accepted in December, 2005.