Analysis of ŽP Group network according chosen fields of New Economic Geography and theory of Learning regions

Stanislav, Kološta and Ivan, Sokáč and Filip, Flaška and Mário, Hošala

Ekonomická fakulta, Univerzita Mateja Bela, Banská Bystrica, Slovakia

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Ing. Stanislav Kološta, Ing. Ivan Sokáč, Ing. Filip Flaška, Ing. Mário Hošala
Faculty of economics, University of Matej Bel, Tajovskeho 10, 975 90 Banska Bystrica

ABSTRACT

Paper is based on theoretical knowledge of current trends in regional development – New Economic Geography and the theory of Learning regions. Paper is primary focused on a large company – located in the Banská Bystrica region – and on a network created by it and their importance for regional development. We explore processes within the Mother Company and its network that are enacted during creation of industrial network which was initiated by the Mother Company. In addition, we also explore importance of such a network for regions; knowledge and information flows within this network and their importance for regional development; innovations and investments to human capital through Mother Company and importance of these activities for region.

Key words:
Region. Regional development. New Economic Geography. Learning region. Network. Knowledge flows. Education. Innovations. Investments. Human capital.

Introduction

Goal of this paper was to apply current knowledge of theoretical approaches in regional development in the fields of network creating, knowledge flow in network, support of education, science, research, and innovations to specific company and the network created by this company in and outside of Banska Bystrica region. We also tried to determine if there are tendencies for further forming of small region of the mother company (in comparison with for example regions in Scandinavia) from the point of view of current trends in the regional development. Therefore this paper is quite unique in this field what created space for further research and comparison with conclusions of other authors.

Majority of current works in the field of regional development are influenced by NEG

and theory of learning regions. Importance of large companies for regional development is undeniable. Importance of large companies as a innovative poles of regional development in the Slovak republic is also stressed by the National Council of the Slovak republic (national strategy of regional development for 2007-2013). We used the very same approach in this paper. We chose network of 22 companies of ZP Group with Iron-works Podbrezova, Inc. localized in the Banska Bystrica region with as an object of this paper. Subjects of research are new trends in regional development, particularly new economic geography and theory of learning regions in which we focused on the process of industrial network creation, knowledge flows in ZP Group network and also on education, science, research and innovations in the Mother company of ZP Group.

From the methods of scientific research, we used methods of comparison, analysis and synthesis, induction and deduction, description, scientific abstraction, and historical and logical methods. We also used quantitative methods that included time line analysis (to evaluate dynamics of development using coefficient of growth and average coefficient on chain and average index basis). Paper includes summary of main approaches. It reveals problematic field that require further investigation in the future.

ZP Group network creation and importance of this process for regions

We think that activities of large companies can significantly increase the life standards of regional population even thou they do not have to significantly contribute to equalization of disparities among regions of the NUTS III level in Slovakia (in basic indicators of regional growth - GDP per capita, unemployment rate, average wage etc., but also in researched indicators of NEG and theory of learning regions such as share of expenditures on science and research on GDP, share on total number of research and development institutions, number of people employed in research and development, number of innovations, expenditures on innovations etc.). However, increasing the life standards of people should be the main goal of regional development.

Conclusions of analysis of large company activities as initiator of creation of industrial network with territorial impact also in foreign regions made us not fully agree with Olga (2006, p.22) who believes that accumulation of capital in region leads first to centripetal and then to centrifugal tendencies in regions. Based on analysis and controlled discussions with the top management of ZP Group we concluded that first dispersion of economic activities outside of the region of the Mother company (creation of companies) took place and only

after that companies within the regions of the Mother company were created.

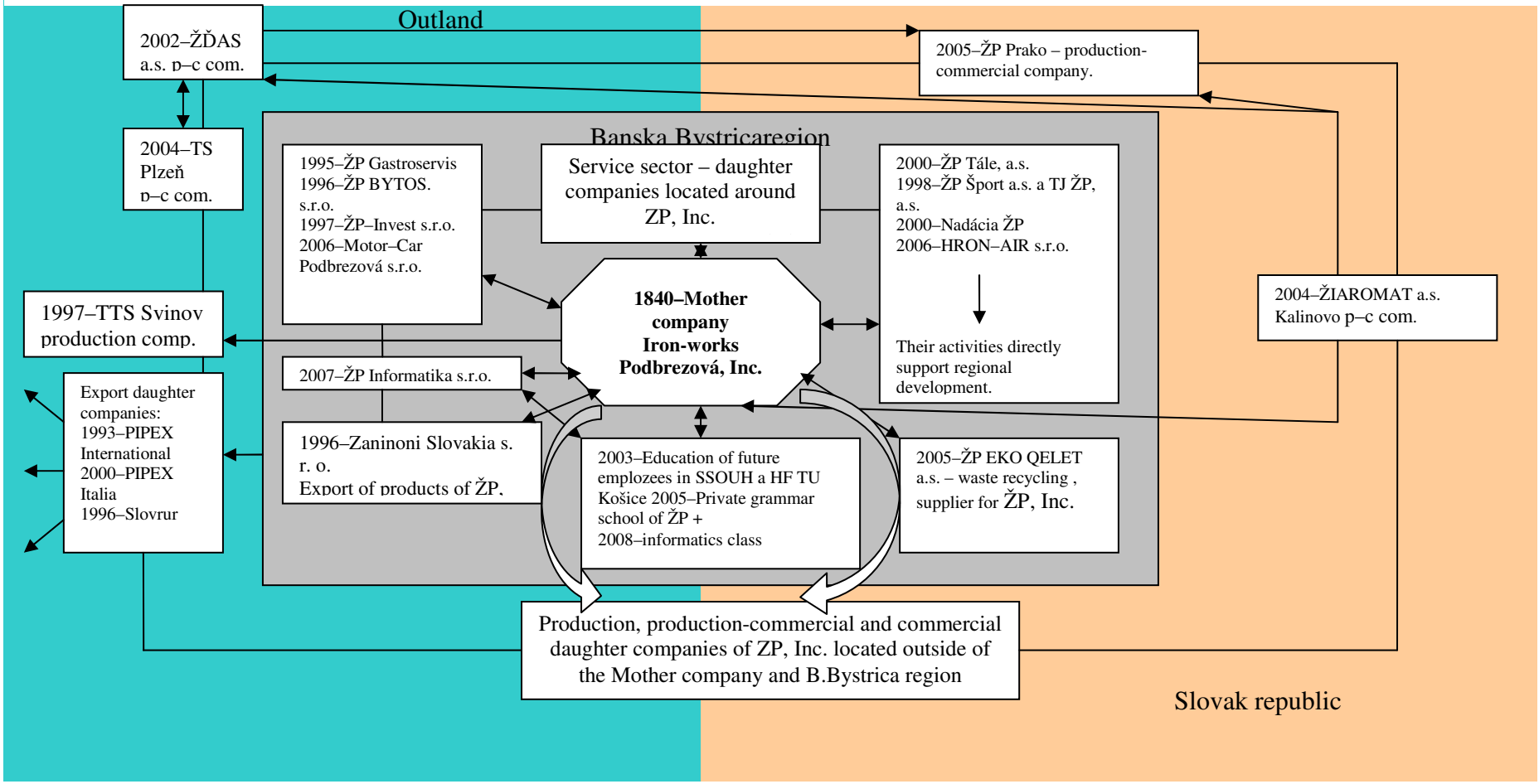
This was done at first in order to unify management and achieve higher efficiency of Mother company activities (increase of competitiveness what helped to maintain employment in region) and later acquisitions of production and production-commercial companies was performed in order to diversify risks and to secure stability and power of the company.

This fact could be caused by specific situation of the Mother company which was not in the same starting conditions (with no foreign capital) after its restructuralization like emerging companies and foreign investors. Statement of Crespo and Fontoura (2006, p. 4) who think that it is important to investigate various pressures between centripetal powers which support territorial concentration and centrifugal powers which support dispersion of economic activities, proved to be truthful.

Financial stability of Mother company is crucial in the process of establishing new daughter companies in any region. It enables daughter companies to create conditions for their success in business. It means providing know-how and experience with successful revitalisation of the Mother company what significantly reduce the risk of failure of such a process. On the other hand, successful process means for citizens of region opportunity of employment and social security (annual increase of 53,57% in number of employees in ZP PRAKO, Ltd. in 2006 or comparable social programs in ZP, Inc. and daughter companies).

Mutual main relations between particular companies of ZP Group with a year of entry to ZP Group network are shown in picture No.1. We divided companies from geographical point of view into companies providing services and production-commercial companies located in Banska Bystrica region including the Mother company ZP, Inc., and into production, productio-commercial and commercial daughter companies of ZP, Inc. located outside of the Mother company and Banska Bystrica region. Graphical display of relations between subjects of network also enables to watch relations between the region of the Mother company and outland.

Picture No. 1 Graphic display of mutual relations between companies of ZP Group



Source: Authors.

Legend: —— reference to particular group of company ⟶ Mutual relations - supplier ⟷ Mutual relations supplier - purchaser;
⋐ connection of the Mother company to production, production-commercial and commercial daughter companies of ZP, Inc., located outside of ZP and BB region.

Business activities in ZP Group are diversified to metallurgy and machine industry and to tourism in order to prevent losses in case of decline in one of the fields. This contributes to development of Banska Bystrica region for example in tourism mainly in Brezno district (Tale, Slovenska Lupca) where excellent conditions for tourism can be found.

We can say about the companies of ZP Group located around the Mother company in Brezno district focused on providing services strongly supported by the Mother company that based on their mutual cooperation (in order to increase competitivness on local and regional level) they form minicluster defined by Martinez (1998, p.3-4). According the study of Ritsila and Haukka (2003, p.1) about learning regions, these activities that include cooperation of regional agents and expanding of human capital and know-how between organizations are the basis for sinter gains. Increase of competitiveness of localised companies means also increase of competitiveness of regions themselves in which these companies are located. Based on results of analysis of network creation process and on performed controlled discussions in ZP, Inc. also about the topic of localpatriotism we assume that from middle and long term point of view there is a real chance that these activities will contribute even to development of less developed regions. We suggest that this process is further investigated in the future.

Knowledge flow in ZP Group network in connection to regional development

We separately investigated the topics of information transfer process and the importance of information flows in network to regional development. Knowledge flows were investigated in two dimensions - through flows and factors that are influenced by knowledge flows between network subjects and business partners, and through knowledge flows in this network.

By investigating the first dimension mentioned above, we concluded that it is important for exchange of knowledge between network subjects and business partners to perform real exchange of information which is useful for both sides in order to achieve increase in competitiveness of these companies. This fact results in the need for cooperation so that the effort to find fields of mutual information and knowledge exchange is useful for both sides and does not decrease their competitiveness. If such a cooperation is initiated by public or third sector then this cooperation should somehow contribute to increase in life quality of citizens in the region. To achieve this, attention has to be paid to the subject that

manages this cooperation.

In industrial network, questioned people marked following coordinator of cooperation between network subjects: combination of public and third sector (42,86%), public sector (35,71%), the rest (21,43%) did not answer. Similar study of Walser and Scherer (2002, p.7) named transformed network of governmental institutions to be the most suitable coordinators.

Qualities of leaders or management are important to make network work properly. 50% of questioned people indicated following requirements for network leaders: communicativeness, ability and willingness to be a leader (consent with Kosonen's study (2002, p.14) and technical competency. 21% of questioned people considered ability to secure connection academic knowledge with practice to be the most important quality of a leader (this factor is also stressed by Rostasova (2004, p.152)). Answers in our survey are in basic accordance with theoretical basis of this paper which describes network leader as a flexible manager who is able to search for new activities, to define network rules, and to react flexibly to changes of economic environment.

Lack of time, busyness, bureaucracy and long processing time together with non-standard requirements for standards were indicated as specific problems of cooperation mainly with subjects from outside of ZP Group. That means that further investigation of the time management issue in the process of information and knowledge exchange in networks is needed.

In the second dimension - between subjects of the ZP Group network - we did not come to clear conclusion about the question what is more important: whether formal, codified knowledge (published information, for example a handbook) or informal, tacit knowledge (ideas of employees, information exchange, making contact on exhibitions etc.).

Although results of our survey suggest higher importance of informal knowledge in network, additional controlled discussion with the top management of company did not lead to clear answer of the question about what type of knowledge is more important. It depends on specific conditions, time and also on quantity of informal contacts. In general, we verified conclusions of Geenhuizen and Nij Kamp (1999, p. 18) that existence of formal networks in region alone does not secure innovativeness. It is achieved often thanks to willingness to cooperate and to existence of informal relationships within formalised structures of networks.

Our survey revealed that according questioned people, the most important ways of gaining specific information/knowledge both within and outside of networks are study of

technical books, excursions and attendance on seminars (36%) together with internships and face-to-face work meetings (35%), leaving the remaining 29% for getting information from internet, intranet and media.

The most important ways of gaining specific knowledge/information both within and outside network proved to be internet, intranet and media (29%) and laws (14%) in case of formal channels of spreading the knowledge while the most important informal channels were work meetings with business partners (29%), seminars and personal consultations (21%). 7 % of people did not answer.

These conclusions were in general accordance with the most important sources of information for companies in EU-27 countries in the field of innovations listed in the Eurostat study (Parvan, 2007, p.1) which ranks sources of information as follows (from the most important to the least important): inside the company or network, customers, process of product or service delivery, competition in certain field, conferences and exhibitions, scientific publications, consultations, professional associations, universities and research institutions, governmental or public research institutions.

Just like Todtling in his research (2004, p.32), we were unable to clearly decide which channels are more important. It means that a mix of sources and ways of getting information listed above is used in practise with predominant use of internet and face-to-face work meetings and consultations.

Survey also revealed that production and production and commercial companies of the ZP Group as well as the Mother company consider raw materials to be the most strategic input required for sustainable competitiveness. The most strategic input for companies providing services and for IT companies are information and skilled employees who are able to continuously work on themselves. When comparing our results to the results of Bucek´s study (2006, p.17) which found information and process of systematic learning to be the most strategic input, results in industrial network of ZP Group do not really reflect Bucek´s theory.

Quality inputs for prices acceptable by companies of ZP Group are very important for maintaining of competitiveness on demanding world markets. Nevertheless, the whole process of getting quality inputs very much depends on available information. Therefore we can say that theoretical basis about information being the most strategic information was proved in the network we had investigated (ZP Group) despite the fact that it does not explicitly result from the answers of questioned subjects.

Innovations in ZP Group network

The main purpose of innovations in ZP Group is to be a part of „Top of the class“ what secures growth and competitiveness of both company and region. Applying of innovative technologies means for the region: maintaining of employment, job opportunities for qualified labour in the field of science and research, increase in purchase power of citizens which also indirectly supports employment in the region, better working conditions, reducing pollution of environment caused by activities of the company (solving old environmental burdens such as waste pile of Siklov, reduction of HCL emissions since 2004 by 98,64%, recycling of production waste) and reducing pollution of environment which are not caused by activities of the company but do have impact on health of region population (cooperation with Podbrezova municipality in the field of sewer system, removal of arsenic in drinking water to the level of 8ug/l in the company premises).

The most important step in the process of designing and applying of innovations in industrial network is to accurately define the goal of innovations and to manage to persuade employees to take and active role in the process of innovation design which means that desired goal is set up and conditions for employees to reach this goal are created. Management of such a process from the regional development point of view requires that leaders of industrial networks are communicative, able and willing to be leaders, skilled for such a role and that they are able to connect academic knowledge with practise.

All of the innovations in the Mother company can be regarded as managerial because management as the major stockholder approves type and number of innovations what again sets up high requirements and responsibility for right decisions. Innovation in the Mother company can be in general divided into technological and non-technological although there is not a strict line between them. Non-technological innovations are approximately 10- times more expensive also due to the fact that their creation takes more time and they require cooperation of experts from different institutions. Cost of technological innovations does not include for costs such as purchase of new production lines which are included in investment costs. Non-technological innovations are related for example to research about upgrade of certain technological process. In this case, technological innovation is for example purchase of specific software which improved that process.

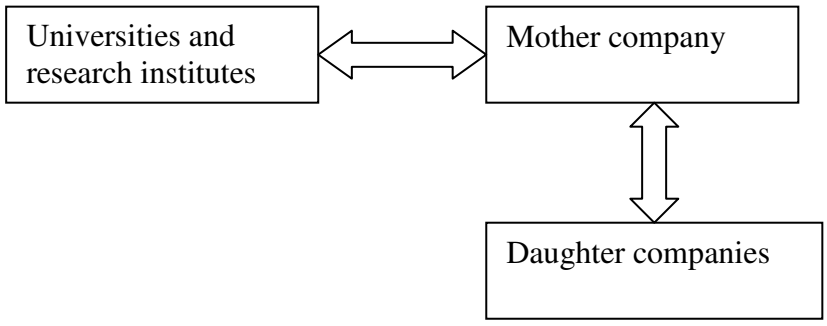
The share of the Mother company on total number of innovations in the Banska Bystrica region in 2005 was 18,1% what proves its importance in connection to innovativeness of region. Implementation of innovations in the Mother company is therefore

related to population of the region (for example in connection with environmental innovations) and also directly to employees (for example improving working conditions).

Support of science, R&D and innovations by the Mother company in the ZP Group network

Investigation of the process of connection of academic knowledge with practise we came to conclusion that in the ZP Group network this process is taken care of by the Mother company which provides its daughter companies with needed information (for simplified graphic display please see picture No.2).

Picture No. 2: Concept of information and knowledge transfer between educational institutions and investigated industrial network



Source: Authors.

Controlled discussion with the management of the Mother company indicated that daughter companies mainly from the service sector get information they need from academic environment through internal information channels (consultations, intranet, monthly statements etc.) from the Mother company. That is also one of the factors why they do not feel such an urgent need to cooperate with educational institutions like the Mother company. Therefore we agree with Newlands (2003, p.15) who thinks that crucial feature of a learning region is the way knowledge is transferred (exchanged) between agents of regional economy with intention to learn.

Due to the fact that the Mother company established centre of excellence, we could assume that it will be the Mother company which will be involved in the process of connecting the academic knowledge and practise at most. More and more opportunities as

well as growing need for cooperation and availability of information about pros and cons of cooperation make us assume that also daughter companies (including those from the service sector) will start joining the process of connecting the academic knowledge and practise soon.

On the other hand, the Mother company is the one from the whole ZP Group network which takes care of education of its current and future employees at most, through Private grammar school ZP, SSOUH, establishing of detached workstation HF of Kosice University or through supporting of talented students using scholarships. Mutual cooperation of university and big company used when establishing regional detached workstation in less developed Brezno district is institutional basis for building of innovative and knowledge networks in region what is significant in the context of forming its future perspectives. Increase of human capital on organizational (institutional) level also creates according Ritsila and Haukka (2003, p.1) one of the most important categories in crucial processes pending in learning regions. This is happening systematically with the purpose of education of employees for the needs of practise.

There is a problem to keep balance between education for needs of practise and development of both human capital and human potential. The Mother company tries to secure this balance using two above mentioned high schools, whose goal is to raise student with his own opinion and active approach to life who is ready for practise. SSOUH was established after transformation in 2003 and Private grammar school ZP in 2006. Therefore we suggest that analysis of educational process success will be done in order to evaluate the extent in which these goals are achieved. Support of education of young people, science and research realised in the Mother company means for the region opportunity to keep and allure qualified labour. It means that these activities of the company contribute to decrease brain drain from the region. This will enable region to gradually redirect to production with higher added value what is also in accordance with the strategy of the management of the company. This process will bring gradual growth in regional GDP per capita, growth in living standards in the region and development of regional infrastructure.

Base on analysis of selected indicators of new trends in regional development (such as process of network creation, knowledge flows within network, education of human capital in accordance with the fields of science, research, innovations and investments) i.e. new economic geography and theory of learning regions we assume that Banska Bystrica region does have a perspective to develop in this way also due to the location of ZP, Inc. and its daughter companies. Initiated activities and forecasts of the Mother company and its daughter

companies in the ZP Group network (in the fields of human capital education, applied science and research, innovations, international cooperation with universities and research institutions, establishment of centre of excellence etc.) verify it.

Therefore we can state that the Mother company is one of the subjects that will significantly contribute to achieving of Regional innovative strategy issued by Banska Bystrica self-governing region.

We can say that paper updates the works of mainly Scandinavian authors who we agree with in many researched areas. We concluded that activities of a big company and a network that it creates do have a solid space in current theories of regional development and that they significantly contribute to bettering the life in regions. Investigation of activities of big companies will be important also in future mainly in the field of applying and developing new theories of regional development.

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