

COMPETITIVENESS
OF SELECTED INVESTMENT DESTINATIONS
IN THE BUSINESS PROCESSES OUTSOURCING INDUSTRY

Doctoral dissertation

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The present doctoral dissertation focuses on assessing the readiness of science, business and administration institutions to undertake, and implement cooperation by referring to the concept of the triple helix¹. The operation of the triple helix² is a way to look for synergy effects resulting from the cooperation of individual entities included in its composition³. The concept of triple helix is one that includes a range of theoretical considerations and empirical research in the field of relations between three types of entities. Both national and international research lacks model, empirical approaches to the occurrence of synergy with regard to the competitiveness of cities and the selection of locations for the business processes outsourcing industry⁴. The main objective of the present work was to fill the research gap by conducting empirical research. The assumption of the doctoral thesis was also to formulate the assumptions of the cooperation model and to measure the current readiness of selected investment destinations⁵ from the modern business services sector to initiate cooperation in accordance with the triple helix concept. The aim of the present doctoral dissertation was to fill the research gap by supplementing the research on the cooperation of public administration, science and business environments, and to create a map of the activity of this cooperation in modern business services centers in Poland, in reference to the classification of

¹ H. Etzkowitz, *University-Industry-Government: The Triple Helix Model of Innovation*, Business School Newcastle University 2007, http://www.eoq.org/fileadmin/user_upload/Documents/Congress_proceedings/Prague_2007/Proceedings/007_EOQ_FP_-_Etzkowitz_Henry_-_A1.pdf [access: 10.10.2015].

² Potrójna helisa jako modelowa forma współpracy środowiska nauki, biznesu i administracji.

³ Ministerstwo Gospodarki, *Klustry. Polityka rozwoju gospodarczego opartego na klastrach*, p. 6., <http://www.infotech.org.pl/triplehelix.html>, [access: 26.04.2016].

⁴ *Business Process Outsourcing* - outsourcing of business processes, commissioning selected business processes to be performed by external entities that are responsible for their quality and efficiency.

⁵ Investment destination - final destination of the investment, see P. Maleszyk, M. Sagan, *Wpływ rynku powierzchni biurowych na atrakcyjność inwestycyjną Lublina dla sektora usług biznesowych*, „Zeszyty Naukowe WSEI seria: EKONOMIA 2016, nr 11(1) pp. 71–87.

the Net Readiness methodology, as proposed by the Authors⁶, and applied in the present work. For the purposes of the study on cooperation between the science, business and administration environments in Poland, we decided to analyze the attitudes of respondents in the areas of *leadership, management style, competence and technology*⁷. The further aim of the dissertation was to create a method for measuring deviations of the current degree of cooperation between the science, business and local administration environments from the optimal triple helix model, and the application of linear regression models explaining the influence of a number of factors conditioning the functioning of the triple helix on the level of *leadership, management style, competence and technology* in groups of mutually cooperating entities. Potential differences in the attitudes of particular groups of entities formed an additional area for our analysis⁸.

The dissertation assumes that the adaptation of the modified Net Readiness (NR) methodology enables us to assess the level of readiness of the science, business and administration environments in Poland to establish mutual cooperation.

Our main objective was to develop an original methodology of readiness to function according to the triple helix concept (Triple Helix Readiness) as a tool to assess the level of readiness of the science, business and administration environments to cooperate in selected investment destinations in the business processes outsourcing industry in Poland.

The subjective scope of the presented dissertation included the opinion survey of senior management of enterprises providing services in the field of modern business services, the opinion of the management staff of state universities and the opinion of the senior city officials responsible for contacts with investors.

The subject scope of the research included the theoretical and practical aspects of the triple helix model. Our analysis covered BPO/ITO centers in Poland.

The spatial scope of the research covered entities operating in Poland. Investors from the BPO/ITO sector were present in all of the analyzed cities.

We selected the following **research methods**:

⁶ A. Hartman, J. Sifonis, J. Kador, E-business. *Strategie sukcesu w gospodarce internetowej*, Wyd. K.E. Lider, Warsaw 2001, pp. 2-39, 347-351.

⁷ *Leadership, management style, competences, technologies* - areas that relate to the conditions characterizing cooperation. These areas are a component of the Cooperation Readiness Report forming part of the questionnaire. Autoska refers to the method of Net Readiness by A. Hartman, J. Sifonis and J. Kador. The methodology defines four elements: *leadership, management style, competences and technologies* that determine the ability of enterprises to effectively operate in e-business and implement projects that have a very large impact on the shape of the organization. Cf. A. Hartman, J. Sifonis, J. Kador, E-business. *Strategie sukcesu w gospodarce internetowej*, Wyd. K.E. Lider, Warsaw 2001, pp. 2-39, 347-351. When analyzing the data, arithmetic means were used for each group of entities in the respective criteria. For each of the four areas: *leadership, management style, competences, technologies*, for example for leadership, respondents rated 5 factors decisive for readiness to cooperate, i.e. $P_{sr} = \frac{\sum_{i=1}^5 x_i}{5}$

⁸ The analysis was carried out in comparison to the ideal model forming a benchmark for the advancement of cooperation. We elaborated the results in relative (%) and absolute values. The model, as adopted by the author, refers to the value of 5 and was developed on the basis of the five-point Likert scale, as applied in the questionnaire. The work also includes Spearman's rank correlation analysis of the relationship between the values determining readiness to cooperate and the level of its advancement. Linear regression analysis was also applied to assess the impact of variables on readiness to cooperate.

qualitative methods:

- literature review, review of secondary data: reports on the development of BPO/ITO centers;
- exploration⁹ of factors determining the location of the investment;
- analysis of readiness for cooperation of individual BPO/ITO centers in case studies,
- modified Net Readiness methodology¹⁰.

Qualitative methods were supplemented with quantitative methods such as the *Computer Assisted Web Interview (CAWI*¹¹), statistical data analysis (elements of descriptive statistics) using frequency tables, Spearman's rank correlation and linear regression. In order to elaborate conclusions from the conducted research, we applied the method of graphical and descriptive presentation of results.

The research tools were prepared individually for each group of subjects of the present study. Empirical research was carried out using an online platform¹² based on three specially constructed questionnaires.

The discussed objectives of the doctoral dissertation, research methods, research sample, used research tools and methods, all determined the final structure of the work. The dissertation consists of 5 chapters. Chapters I-III are theoretical chapters, while chapters IV-V are empirical and contain the results of research and their interpretation.

The results of our research indicated that **the local authorities** assessed their preparation for undertaking cooperation to be at very high level. The highest preparation for carrying out activities according to the triple helix model is demonstrated by Bydgoszcz, Poznań, Warsaw and Białystok. These cities were qualified to the group of visionaries of cooperation (26.67% of the research sample). The locations such as: Gdańsk, Szczecin, Rzeszów, Opole, Toruń, Kraków, Kielce, Katowice, Łódź and Olsztyn had slightly lower scores. They formed the most numerous group of cities - the group of cooperation experts (66.67%). These cities are characterized by their high level of preparation for the implementation of cooperation, yet some elements of this cooperation still require improvement. Lublin is the sole city remaining in the sphere of further distance from model cooperation within the net. It was qualified to the group of cities with a sense of cooperation (6.66%).

The results characterizing cities **in the assessment of the scientific community** indicate that universities located in Gdańsk, Kraków, Poznań and Białystok are quite well prepared to

⁹ Exploratory research is conducted to describe a phenomenon that was only partially explored to date, on which there is insufficient information. It is an attempt at preliminary, basic, general understanding of a phenomenon, familiarization with new issues. See: P. Dobrodziej, *DobreBadania.pl*, <https://dobrebadania.pl/badania-eksploracyjne-ang-exploratory-research> [access: 29/04/2019].

¹⁰ Net Readiness methodology by A. Hartman, J. Sifonis and J. Kador. Four elements have been defined in the methodology: leadership, management style, competences and technologies, which determine the ability of enterprises to effectively operate in e-business and implement projects that have a very large impact on the shape of their organization, A. Hartman, J. Sifonis, J. Kador, *E-Biznes. Strategie sukcesu w gospodarce internetowej*, Wyd. K.E. Lider, Warsaw 2001, pp. 2-39, 347-351.

¹¹ CAWI – Computer Assisted Web Interview forms part of the quantitative methodology of market and opinion research with the online survey technique. Acquiring data from respondents is provided by electronic questionnaires available via web browsers, and supervision over their completion is ensured by dedicated research software - it is responsible, among others, for the control of the degree of testing the assumed sample, the right order of asking questions and verification and correct recording of the answers provided.

¹² Internet platform: <https://ankiety.umcs.pl>.

undertake and implement cooperation with other entities representing science, business and local authorities. This is indicated by their high scores and qualification to the cooperation expert group (28.58% of the research sample¹³). Failure to meet certain essential conditions related to even the low number of implemented projects creates a kind of barrier forcing entities to remain visionaries of cooperation. These barriers may result from insufficient preparation in the area of leadership, management style, competences and technology. In the opinion of science representatives the cities with sense of cooperation constitute a numerous group. The academic environment located in cities such as Łódź, Toruń, Szczecin, Lublin and Warsaw is characterized by a higher than average distance from the maximum assessment of conditions for cooperation. These cities were qualified to a group of locations with a sense of cooperation (35.71%). The emerging dysfunctions result from insufficient financial resources, lack of efficient information flow, which is evident in both the large and the smaller cities. We can talk about low preparation for cooperation in case of scores below 60 points. Such scores were recorded in Katowice, Wrocław, Bydgoszcz, Zielona Góra and Opole (35.71% of the research sample). In these cities, universities are aware of the cooperation process, but they are not prepared for its implementation due to disturbances in the management process, reduced levels of competence, or low standards of technology.

Business representatives from cities such as Kraków, Poznań and Gdańsk were qualified to the same group of readiness for cooperation as representatives of science (cooperation experts). It can be concluded that in these cities both environments meet the conditions determining their level of preparation for external relations at a similar level. The group of cooperation experts (33.34%) also included enterprises operating in Wrocław and Warsaw. Barriers to developing cooperation are not large, but they relate to some of the crucial elements, such as the lack of stable indicators to assess the impact of cooperation projects. Enterprises characterized by a higher gap separating them from the conditions necessary for the proper conduct of cooperation were located in Szczecin, Toruń, Katowice, Łódź, Lublin and in Olsztyn (sense of cooperation - 40% of the research sample). In these cities, it is necessary to improve the conditions that would raise the preparation for cooperation. Enterprises should find common goals, for example from the commercialization of research results in relations with the science environment, and implement a several-year cooperation development plan consistent with the economic development objectives of the city, where they operate. The lowest scores indicating the remoteness from the expected level in the areas of leadership, management style, competence and technology were recorded in Rzeszów, Bydgoszcz, and Opole (awareness of cooperation - 20% of the research sample). Enterprises located in these cities are well aware of the challenges of cooperation, but their willingness to undertake it is at a low level. A low score was also recorded in Zielona Góra, which was qualified to the group of agnostics of cooperation (6.66% of the research sample), proving that cooperation is located outside the sphere of interest of subjects of our research. We can

¹³ We adopted the number of cities (locations) from which the returned questionnaire surveys were obtained as N. On this basis we calculated the percentage structure of cities according to the classification to the groups of cooperation readiness in the opinion of scientific entities (N = 14 - questionnaires returned from representatives of universities located in fourteen cities) and business (N = 15 - questionnaires returned from business representatives located in fifteen cities).



point to the lack of mutual trust that prevents establishing relationships that bring measurable benefits as one of the barriers.

In summary, the areas that need improvement in order to increase the efficiency of cooperation are: development of a system for measuring effectiveness, increasing flexibility in adapting to the often diversified expectations of partners and developing strategies. Activities aimed at elimination of gaps at the interface between science, business and local administration could raise the investment image of the city, and thus its competitiveness compared to other economies. Cooperation can be used as a bargaining power in perceiving the city as a mature investment location.

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