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*Translation from Polish.*

*Translation from an original document. The document consists of eight pages; on the pages 1-7 in a bottom right corner there is an initial.*

Lublin 27 April 2015

Associate Professor doctor habilitated Agnieszka Sitko- Lutek

Institute of Management

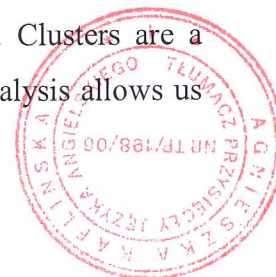
Maria Skłodowska – Curie University in Lublin

*A review of a doctoral thesis “Clusters as a factor of competitiveness of candy industry companies in Mexico” by Mgr Juan Carlos Neri Guzman under scientific supervision of Doctor habilitated engineer Mariusz Bednarek, professor of the University of Social Sciences, an auxiliary promoter doctor Zofia Patora-Wysocka.*

*Justification of the subject*

In the face of globalization the phenomenon of competition is getting a different meaning, while the analysis of a new development paradigm for such countries as Mexico becomes particularly interesting. Increasing links between economies, the growth of liberalization and trade market integration, capital flow deregulation, reduction of communication and transportation costs have changed the conditions of conducting economic activity. Therefore, global economy leads to globalization of enterprise activity. The growth of competition in the world markets is related to the fact that the change of production process localization can become for enterprises the method for effectiveness increase and for strengthening their competitive position in the international environment.

In order to meet these challenges, enterprises are looking for new solutions in the area of management. Thus, clusters and their consolidation have gained special significance in the aspect of regional policy. They are formed in various industries, from traditional ones to the sectors of highest technology and also in various countries and world regions, both spontaneously and due to a thought through strategy of public authorities. Clusters are a significant area of interests of theory and practice of management as their analysis allows us



to understand better the economy structure and specialization; their existence leads to generation of working places, innovation and economic progress. It is, then, a very important issue for the Mexican economy because industrial clusters point out the problems in the context of trade liberalization. It can be treated as the evidence of enterprise ability to cooperate and adopt a customer-oriented approach. Innovations and supportive organizational culture are significant in creating competitive advantage. Against this background the author points out industrial connections, thanks to which enterprise activity is not isolated but it is supported by the government, institutional subjects, administration and other service providers that aim at the increase of competitiveness.

The interest area of the author of this thesis relates to those important issues. His research focuses on the tenth biggest city in Mexico - San Luis Potosi. Mexico is the second biggest provider of food in the USA and the third on the American continent; food industry is one of the six sectors which promote competitiveness and generate 10% of GDP. The author believes that industrial cluster initiative can become a strategy for promoting enterprise development and facilitate economic activity in the sector of candy and chocolate production, and consequently, it may influence enterprise competitiveness and indirectly the standard of living of the citizens.

The selection of research problems and the scope of research concerning cluster analysis as competitiveness growth factors of candy enterprises in Mexico is extremely innovative, current and purposeful.

### *Assessment of research objective and hypotheses*

The research objective is the analysis of candy and chocolate production industry in San Luis Potosi in the light of industrial cluster approach and identification and development of activities in order to consolidate candy and chocolate production industry from the perspective of industrial clusters. The author took into account the following specific goals:

1. "Analysis of bibliography on the subject of clusters.
2. Analysis of the activity which is conducted in candy production industry in Mexico (example of San Luis Potosi).
3. Designing a model for the measurement of cluster effect on competitiveness.



4. Putting forward activities for competitiveness increase in candy production industry in San Luis Potosi and putting forward recommendations for other regions in Mexico". (p. 11)

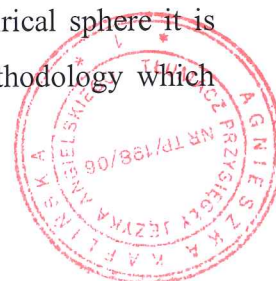
The author posed four research questions and formed three following hypotheses (p. 11):

1. Research in the area of clusters and competitiveness factors was mainly conducted abroad and for that reason its results do not apply directly to Mexican industry, in particular to SMEs.
2. It will be possible to determine the role of a cluster as a competitiveness factor in Mexico though research in candy production industry in this country.
3. In order to define the influence of a cluster on competitiveness, the author developed a research model and its practical verification will be done in candy production industry (in particular in SMEs) in San Luis Potosi.

In order to verify those hypotheses, the author suggested original research methodology which consists of four stages: introductory, descriptive, correlation research and explanatory. The first stage is based on an extensive review of bibliography in the area of industrial clusters. In total 333 bibliographic positions. The descriptive phase focuses on the identification of dominant economic activities, the analysis of economic structure of local industry in San Luis Potosi, mainly on the basis of industrial specialization index. The third stage is based on the research model which consists of 56 variables, out of which 44 (79%) are soft data, while 12 (21%) are hard data which were obtained from relevant institutions. The questionnaire, which was used in this research, covers three types of variables: nominal, dichotomous, the scale using numeric values and Likert scale.

The research process was carefully designed and it fully enables the author to find the answers to the problems which were posed. It consists of four stages and in a very insightful and comprehensive way lets the author identify key phenomena and dependencies. The research process, which has been designed in this way, made it possible to obtain answers to the four research questions, to verify positively research hypotheses and to meet the general and specific objectives.

Valuable research results include: comprehensive research of enterprises in candy production industry as an element of a production chain in food industry. In the empirical sphere it is worth noting the development of a research model and the research methodology which



aimed at the analysis of local economic activity situation from the perspective of cluster formation. A question can be asked: *To what degree do this research model and methodology have a universal character and can be applied in other types of industries or in other regions and What are the main obstacles to implementations of those solutions?* A utilitarian value of this work consists of putting forward the solutions which promote development and clustering in those industries as a method for strengthening competitiveness.

### ***Thesis structure***

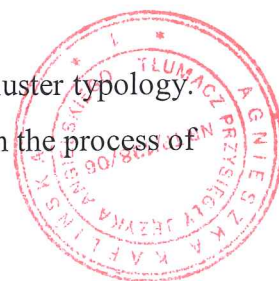
The thesis consists of an introduction, five chapters and a bibliography, a list of 103 figures, 49 tables and an appendix with a research tool. It covers in total 264 pages and consists of two parts.

Chapter one is devoted to research methodology. The author presented his research process and research scope, model and variables, the main goal together with four specific ones, four research questions, three hypotheses and expected results. The introduction, where the author depicts the situation of a research problem and justifies why he tackled this problem, and the methodological part are a precise synthesis of the material which will be presented in further parts of the thesis; they are the evidence of reliable research methodology of the Ph.D student.

Chapter two “Industrial cluster – literature studies” include eight examined problems, starting with the theoretical foundations of industrial clusters. The author presented such key issues as: cluster theoretical context, theories – of industrial localization (by Smith, Schaffle, Launhardt, Weber, Christaller, Hamilton), of production chains or industrial districts. A further part examines endogenous development theory and industrial cluster conception by Porter. The author presents in his work references to values, culture and corporate identity, which are different from a traditional economic perspective. One can, then, ask a question *What is organizational culture in enterprises in Mexico like?* and *What facilitates and what obstructs cluster formation?* Then the author analyses the context of competitiveness and innovativeness in a systemic approach.

The next part (2.2) presents competitiveness measurement methodology. The author presented competitiveness determinants, focusing on the research level: national and regional ones, research of industry and business as well as a systemic approach.

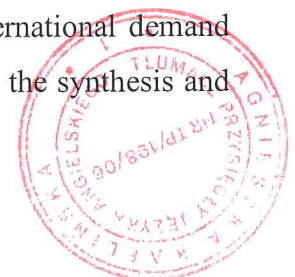
The next research area is a cluster definition. The author demonstrates (2.3) cluster typology. The content, however, focuses on the typology of methods which are applied in the process of



cluster creation. Thus, there are no references to various division criteria, such as: development stage, a number of stages in a production chain, competitive position, significance of technology or to Meyer-Stamer's work (2000), which distinguishes three types according to size and the property structure of the subjects which belong to it. This omission may result from the fact that not all the typologies which have been mentioned above can be applied to the research conducted by the Ph. D. student. A further part is devoted to the models of industrial clusters. Among interesting considerations, which are based on bibliography, one can find presentations of cluster models that refer to competitiveness, such as a triple helix model, Porter's model, chimney model, systemic competition model, ITESM industrial cluster model or models by Zalewski and Skawińska. A logical consequence the presentation of cluster creation, taking into account their limitations, strengths and weaknesses (2.5).

A further part of the publication is devoted to clusters as global competitiveness growth factors. The author discussed the problem of clusters worldwide, for example Euskadi, which was formed in 1993, or salmon cluster in Chile. He analyses the examples of Mexican clusters – Baja in California, Queretaro, Jalisco – all of them from an electronic sector. The case studies which have been presented play a valuable illustrative role for the theoretical material. The discourse logic is in this part absolutely correct, starting from macro context, through a systemic approach to industrial clusters and sources, to typology and examples in an international perspective. A certain weakness of the data, which are subject to analysis in this part of the thesis, are references in some analyses to the data of 2003, which for instance concern clusters worldwide. Taking into account a big dynamism of changes, they can be considered as not fully updated. The theoretical part of the thesis ends with conclusions, which in worthwhile synthetic way put order in the scientific discourse.

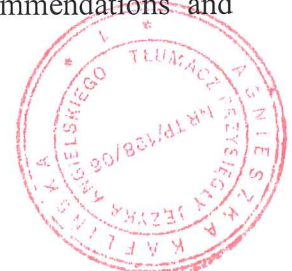
Chapter three of the thesis is devoted to candy industry in San Luis Potosi. It starts with the presentation of candy industry in Mexico, then there is the analysis of geographical localization of San Luis Potosi, and next references to structure, industrial activity and competitiveness. As the result the author presents the role of candy industry in San Luis Potosi and the role of production for candy industry in this region. He shows a strategic localization, main activities and case studies of the metropolitan area and food industry. Then, he makes a presentation of chocolate and candy industry, mentioning international demand and supply, production process and value chain. However, he has not done the synthesis and



comparison of those two presented industries. The chapter ends with the analysis of key competitiveness growth factors for candy industry in San Luis Potosi and conclusions.

Chapter four presents a research model. His original proposition was developed, taking into account five aspects which are at the same time independent variables in the model: industry structure, product realization, actors' integration, product characteristics and activity status trends. Operationalization of the model elements was done on 20 indicators. A dependent variable in this research was cluster integration pace. An application of this model is to affect the growth of functionality, competitiveness and innovation level. The research was done in 104 enterprises out of 208 companies in the candy sector market. In a further part the author verifies the model on the basis of statistical analysis method: standard score, correlation, tests for independence and regression analysis. I consider this part of the thesis very valuable and the author's original research model is the evidence of his high scientific competence. This chapter also presents the research results. The research results point out similarities of those researched industry groups of chocolate and candy, particularly as far as a type of production and belonging to same sector are concerned. However, in chocolate industry two big enterprises dominate, while candy industry is more homogenous and oriented towards the local and regional market; it is more consolidated and more willing to cooperate.

Chapter five presents results and recommendations. It starts with the presentation of candy industry in San Luis Potosi as the basis for the development of recommendation for Mexican states and then there are recommendations for the development of competitiveness in candy industry. The analysis perspective, which has been adopted by the author, on one hand takes into account a short period up to 2 years, a medium period 2-6 years and a long period of over 6 years. At the same time those innovations are presented in the aspect of modernization, financing, innovation growth and technological development and the development of supporting services; the author puts forward strategies for innovation, modernization, cultural and business environment and financial strategy. The author very clearly and precisely verifies the hypotheses, which he has proposed, gives answers to the research questions and points out how to reach the goals (5.3.). In the further part he forms implementation methodologies for cluster development in candy industry together with references to the tasks of individual stakeholders. The last chapter concerns conclusions, recommendations and suggestions for further research.



I positively assess the thesis layout; it is relevant for the adopted assumptions and research methods. Undoubtedly, the author leads a very logical and orderly discourse and can select the most important contents.

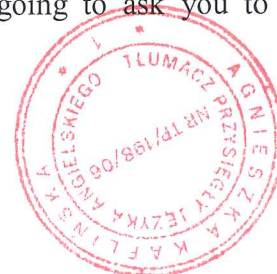
### ***Formal side***

This thesis has been prepared with big involvement, which is evidenced by a big number of graphs, figures and tables which increase the clarity of the thesis. The author has not avoided during his work minute editorial errors, such as spelling of “rol” on pages 211-215.

### ***Remarks and conclusions for discussion***

The subject, which has been discussed by the author, is innovative and fills in the gap concerning the consolidation of clusters in the area of competitiveness increase. The work is on a high technical level and has unquestionable scientific values, such as skillful synthesis of cluster issues and a complex treatment of research methodology. At the same time we cannot deny its application values, while its research conclusions undoubtedly contribute to the discipline of sciences about management. The thesis has been reliably and clearly prepared. A high technical assessment consists of the value of the subject matter, a clearly presented thesis, identification of research problems, identification of the general goal and of specific goals which have been consistently reached, creation of the original research model and its verification, logical conclusions based on the author’s own research and very professional research methodology. Some limitations of the thesis include a producer’s research perspective which to a smaller degree takes into account suppliers and customers. One can ask the questions to what degree this verified research model has a universal character and potential application in other sectors. On the basis of this thesis and the interesting conclusions two questions can be asked:

- 1. What are key difficulties in cluster implementation in Mexico, as in Poland they are defined as: lack of trust between cluster participants and unwillingness to cooperate, fear that innovative solutions will be taken over by competition. Are those universal barriers which are important also in Mexico?*
- 2. According to you how should the development and functioning of clusters be supported by various stakeholders of those processes? I am going to ask you to answer those questions during a public defense.*



**Conclusion**

Summing up, I affirm that the doctoral thesis “*Clusters as a factor of competitiveness of candy industry companies in Mexico*” by Mgr Juan Carlos Neri Guzman fully meets the criteria determined in Article 13.1 of *Academic and Artistic Degrees and Titles Act of 14 March 2003* and is an original independent solution of a scientific problem, it demonstrates a high level of theoretical knowledge of the author in the area of sciences about management and his solid skills of conducting independent research.

*Translator’s commentary: In a right bottom corner there is an illegible signature.*

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I, Agnieszka Kaflńska, a licensed English-Polish translator and interpreter, certify the consistency of this document submitted to me for translation. Translation from an original document.

Reg. number 32/15. Lodz, on 21 May 2015.



*Agnieszka Kaflńska*