Aalborg University

Innovation, Knowledge and Economic Dynamics

Second semester project

How can a municipality influence the economic development at the regional level?

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1. Introduction

The process of development is taken more serious day by day, as the society is continuously evolving. The same thing is happening in the economic market where companies try to stay on top but also look for new opportunities.

Romania is in period of great desire for development and growth, from a national and regional point of view. This period of transition caused all the cities to be more interested in innovation, as a way to modernize the city and the economic field through companies. This brought up an interesting research which also shows the purpose of this paper: to show that a well-established plan/strategy from a municipality that is professional and constant in its actions leads to economic development in its region. In this aspect, the notions of knowledge, development, regional systems of innovations and clusters, as part of the strategy used by one of the actors (the local municipality of Oradea) will be explained theoretically as well as in this particular case.

The paper is structured into several chapters. The present one explains how the whole research project has been conducted, followed by the Research Questions chapter, which shows what kind of information will get an answer further on.

The 3rd chapter contains methodological matters, explaining the kind of methodological approach used, the data and the limitations of the current paper.

The 4th chapter is the theoretical framework, the necessary background collected as secondary data from different authors that have put their mark on the researched area. It also has a short introduction about what can be found in the next chapter.

The 5th chapter is the case study analysis of the municipality of Oradea, a city in NW of Romania and its conducted policies and strategy for development and growth. I am going to explain their vision and plan based on economic and industrial policies based on the administrative reports and different articles straight from the source.

Next, in the conclusions part, I will explain how the study area is correlated with the traditional theory in this matter and will give a resume about what the paper achieved, followed by the references.

2. Research questions

The current paper began with a problem that appeared: the regional need for development and innovation due to stagnation in the economic climate. The stagnation was present on the European level, as in Romania the situation was divided, depending on region.

The city of Oradea (the case analysis) is in a period of transition, with great desire for development and growth. This could be happening because of a certain movement around all country and especially in the western part: the competition with surrounding cities and other municipalities that are better developed.

The problem formulation is the following: **How can a municipality influence the economic development at the regional level?** In this aspect I am going to research the actors' point of view, in order to find out what is the municipality's role towards regional development.

There are also other research questions that can be added to the main questions, like:

- What kinds of measures were taken towards development?
- What are the most important aspects in obtaining and innovative environment?
- Is knowledge important in this matter? What kind of knowledge did the municipality used or tried to implement?
- Does the idea of a cluster work in this case?

The development project began some years ago and to this day the results can be already seen: more companies opened subsidiaries/ working points in the city/area, lower unemployment rate, modernization of the city is beneficial both to the economic agents as well as for the population.

I have found this aspect interesting to analyze from the perspective of policies adopted by the municipality as well as its role in improving the Regional System of Innovation, an engine to regional development and growth.

3. Methodology

This chapter will explain how the research process took place and what methods were used. It contains the methodological approaches, the explanation of the chosen type of methodological approach for conducting the research and some limitations.

3.1.Methodological approach

The methodological approaches (Figure 1) can be described as "the practice through knowledge, which related to paradigm, that represents the philosophical assumptions: and those assumptions lead to a suitable approach to address the issue" (Arbnor & Bjerke, 2009).

2 3 4 5 6 Reality as Reality as a Reality as Reality as a Reality as a Reality as a concrete and mutually world of social manifestation concrete dependent symbolic conformable dertemining construction of human to law from fields of discource intention process structure information independent of the observer THE ANALYTICAL APPROACH THE SYSTEMS APPROACH THE ACTORS APPROACH

Figure 1 - Methodological Approaches¹

3.2.Paradigm

A paradigm can be seen as "any set of general and ultimate ideas about the constitution of reality, the structure of science, scientific ideals and the like" (Arbnor and Bjerke, 2009). The approach used to explain the topic is not only influenced by the researcher himself, but it also varies depending on the nature of the case study itself.

¹Arbnor, I., Bjerke, B.: 2009, "Methodology for Creating Business Knowledge", SAGE Publications, Inc.

There are six paradigms that help analyzing a business problem: "Reality as concrete and conformable to law from a structure: Reality is tangible, concrete and real, which can be exactly measured and observed. Reality as a concrete determining process: Whole society is a developmental process, and every factor influences the process, therefore, analyzing the problem is to understand the relations from the holistic view. Reality as mutually dependent fields of information: The developmental process based on information exchange, and the relation is not fixed which is unstable, the change affects another change" (Arbnor and Bjerk, 2009).

"Reality as world of symbolic discourse: Social reality is constructed on the subjective interpretation of every element in society, and individuals explain reality by interacting with each other. Reality as a social construction: Reality is subjective and a continuous process, every encounter is the element in building social reality, nothing is concrete. Reality as a manifestation of human intentionality: Reality is a reflection of the individual creative imagination, which means reality is created by individuals' consciousness" (Arbnor and Bjerk,2009).

Types of methodological approaches

There are three methodological approaches, based on different paradigms:

Analytical approach-"Reality is objective, and which assume that the whole is the sum of its part. The researchers have to separate and analyze each part, also avoid the influence by the surroundings, try to explain reality through logic" (Kuada, 2010)².

Systems approach; "Reality is as fact-filled system structures in the objective reality and which are related to each other. The structures have their own characteristics, and the researchers try to find influence of one structure to the other and their relation" (Kuada, 2010).

Actors approach; "Reality is as a social construction which built by the ones who participate in it, which means the reality is based on human beings, and the researchers' actions and perceptions also influence the reality" (Kuada.2010).

Different methodological approaches are used for identifying different solutions. The analytical approach provides us "valid and objective knowledge using mainly quantitative methods that try to explain an entire problem through analysis of single parts" (Kuada, 2010).

²Kuada, J.: 2012, "Research Methodology – A Project Guide for University Students", Samfunds Litteratur.

The system approach is used to "obtain objective accessed knowledge, which explores a specific case, giving explanation and understanding of the parts through characteristics of the whole" (Kuada, 2010). The actor approach is related to other method, "which pursues subjective knowledge and understanding of the whole by the characteristics of the parts" (Kuada, 2010).

3.3. Choice of methodological approach

After looking at the "realities" of the paradigm as part of the methodological approaches there have been a few that might be the subject of investigation. The most relevant, in my opinion, are the reality as a social construction.

The next step was to determine which approach fits on what the paper will consist of. The situation is a bit similar as the presentation from the previous paragraph. I consider that, at one point, there may be a small presence of all 3 approaches: the analytical, systems and actors approach. What is influential and dominant, though, and a clear thing, is that the actors approach is dominant as I am going to analyze how an actual participant in the economy can influence it.

"The actors approach, with its ultimate presumption of human nature and construction of reality, encourages an experimentally searching attitude toward both how knowledge is developed and how it is formed in relation to actors in the study area, as well as to actors outside the area"³.

Secondary information within the real system being studied (minutes, statistics, documents, etc.), material that may very well reflect both the environment and other real systems, is used extensively (this source of information is also common in the two other approaches)"⁴.

³ Arbnor and Bjorn- *Methodology for Creating Business Knowledge*, 2011.

⁴ Page 16 from the same source as the previous one

The research that I am going to conduct consists of analyzing how a municipality can influence the economic growth in a region. By doing this I am going to look at all the knowledge, learning and innovation processes as well as the policies adopted. By using the actors approach there is an easily understanding of how the municipality acted towards regional development.

3.4. Research methods

Quantitative research	Qualitative research
Test hypothesis that researchers begins with	Capture and discover meaning once the researcher obtains the data
Concepts are in the form of distinct variables	Concepts are in the form of themes, motifs and taxonomies
Measures are systematically created before data collection and are standardized	Measures are created in an ad hoc manner and often specific to the individual setting of researcher
Data are in form of numbers from precise measurements	Data are in the form of words and images from documents, observations, and transcript
Theory is largely causal and deductive	Theory can be causal or non-causal and is often inductive
Procedures are standard, and replication is frequent	Research procedures are particular, and replication is very rare
Analysis proceeds by using statistics, tables or charts and relating them to the hypotheses	Analysis proceeds by extracting themes of generalizations from evidence and organizing data to present a coherent, and consistent picture

Two research methods exist: the quantitative and the qualitative research, as it follows⁵:

The research method I decided to use in the project is the qualitative research method, which "implies an emphasis on the qualities of entities and on processes and meanings that are not experimentally examined or measured [if measured at all] in terms of quantity, amount, intensity,

⁵ Silverman, D. 1993; Neuman, L. 2006; and Bryman, A. and Bell, E. 2011

or frequency. Qualitative researchers stress the socially constructed nature of reality, the intimate relationship between the researcher and what is studied"⁶.

3.5.Data collection

Most of the data collected in this research can be categorized as secondary data, but there are also few signs of primary data. The consistent data has been used in different ways but most of them are gathered from articles, reports, administrative data, etc. The data used in the research is official, either from interviews by municipality's officials or their own reports.

3.6.Limitations

There is no scientific paper that is perfect or not in need/questionable of any modifications/perspectives. Therefore, the paper has its own limitations, mostly because of the type of data used: the secondary data.

Using secondary data, different types of sources/authors were compared, their point of view analyzed while trying to understand the impact of the problem. Therefore, it cannot be sure that all the information used from different authors is relevant on the long run. Also, the case study is presented as what happened until the present day and what could possibly happen (in a favorable way) in the future. This limits the information accuracy as it is not know yet if all the plan will work as described in 5 years for example.

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⁶ Denzin, Norman. K. and Yvonna S. Lincoln: Handbook of Qualitative Research. 2nd edition. Thousand Oaks, CA: Sage, 2000, http://libguides.usc.edu/writingguide/qualitative (accessed 28 August 2016)

4. Theoretical framework

In this chapter major theoretical aspects will be treated regarding: knowledge, innovation, learning organizations, learning economy, policies, growth, sectorial systems of innovation and clusters.

4.1. The importance of knowledge

The nowadays need for **knowledge** is brilliantly explained by Nonaka: "The ever increasing importance of knowledge in contemporary society calls for a shift in our thinking concerning innovation in large business organizations-be it technical innovation, product innovation, or strategic or organizational innovation. It raises questions about how organizations process knowledge and, more importantly, how they create new knowledge... For example, innovation, which is a key form of organizational knowledge creation, cannot be explained sufficiently in terms of information processing or problem solving. Innovation can be better understood as a process in which the organization creates and defines problems and then actively develops new knowledge to solve them".

From this point of view it is concluded that an organization must be researched for its knowledge and how it creates it, on one side, and the information, on the other side.

Before going on it is important to explain the importance of **knowledge** by showing the **taxonomy** of it:

- "Know what facts about the world
- Know why scientific laws in relation to nature and society
- Know how the capacity to do something, how to use tools and concepts
- Know who know who knows what and what to do⁸".

We can see that there are several aspects of knowledge that matter, only by knowing one thing isn't enough. The taxonomy is usually used for innovation processes that happen inside a company, but some aspects can be used on the regional level as well. For example, knowing why

⁷ Ikujiro Nonaka- *A dynamic theory of organizational knowledge creation*, Tokyo, 1994, page 14.

⁸ Bengt-Åke Lundvall- *The economics of knowledge and learning, Aalborg University, 2003, page 5.*

the economy is not working but not knowing how to stop it in an actual case won't help. All these aspects need to be researched thoroughly before it goes on to the next step for the solution.

Another example which is related to the practical case is the next one: we know what happened in the past that is bringing the economy to a stagnation point (same old companies) and why (they can't do anything more, like improve the market, because they are saturated). The next step is to find out how can we use different concepts to increase the economic growth in the region (maybe through new areas built for new companies to come in) and who can do that (the actors of the game).

Nevertheless, there is another thing that may be in the way for some organizations:

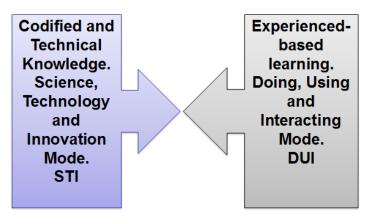


Figure nr 1. The 2 ideal type models of knowledge- STI and DUI⁹

Some organizations have a dominant **STI** mode, while others are more **DUI** dominant. In order to gain more knowledge that can be applied in that specific field it's advisable to have both of these types combined together. Having both of the models in an organizational knowledge can boost innovation because of its diversity.

Having seen all the information about knowledge and its importance we can say that more knowledge can only do better for an organization, improving it. Organizations existed through different stages of time and they are even more challenged every day. Some of them disappeared because they couldn't face a particular problem which occurred at one point, others because it lacked financial support or had bad management but all of them tried to learn.

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⁹ Berg Jensen et al.: *Forms of knowledge and modes of innovation, 2007.*

This is the next important thing that the paper is going to treat: the **learning** organizations, which:

- "Are flatter and allow more horizontal communication inside and outside the organisational borders
- Establish cross-departmental and cross-functional teams and promote jobcirculation between functions.
- Delegate responsibility to workers and invest in their skills
- Establish closer co-operation with suppliers, customers and knowledge institutions¹⁰.

Next question that pops up is: why are the learning organizations better than the traditional ones? The answer is that, as society continuously develops, the organizations are forced to adapt to new circumstances, otherwise they are going to go extinct. The market will be dominant of learning organizations that will transform the area into a learning economy. Communication, hierarchical decisions are made faster and easier.

Nowadays, the organizations as economic agents are not the only ones that are affected by the process of learning in order to innovate more effective. Another example is the government from any country: they allocate lots of money to research and development through their science and technology policies.

This aspect is also treated later as an example, as well as in building cluster and cities by the regional authorities. They are even motivated by the European Union's framework programs and regional funds because they are highly supportive in this matter of research in transition regions. This is multi-beneficial because it's like a magnet to innovation and creation.

Therefore, the **policy learning** is "a process where agents or organisations engaged in the design and execution of public policy change their mode of operation and actions on the basis of experience and on the basis of systematic gathering and analysis of information"¹¹.

¹¹ Lundvall- Policy learning as a key process in the transformation of the Chinese Innovation Systems, 2005

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¹⁰ Lundvall- Innovation and competence building in the learning economy – Implications for innovation policy, 2008

Authors consider that an **innovation policy** needs to:

- "Establish the general knowledge base through investment in basic research and formal education.
- Establish links between public research and industry.
- Combine the promotion of R&D efforts in industry with the promotion of learning organisations"¹².

This can be done by using new objections, instruments or modes of implementation.

4.2. The Systems of Innovation

Having talking about knowledge, learning organizations, learning economy and learning policy let's get to the next step, where they are all present.

"The innovation system is made up of organizations that, through their resources and activities, affect the speed and direction of the innovation process; it also includes the relationships and interactions between these organizations. The system can be characterized by its specialization, its institutional set-up and its connections to the environment" ¹³.

There are at least two common meanings of the notion of institutions:

- 1. Concrete things like commercial banks, police stations, ministries, etc.
- 2. The things which create patterns of behavior in society, like social norms, laws, regulations, etc.

Institutions have a great impact over resource allocation and change for development and growth.

"It seems beyond dispute that a change of technology in the pure sense coupled with organisational changes at various levels of aggregation, are the main driving factors behind the continuous increase of living standards entailed by this process.¹⁴"

Institutions ⇔ *Innovation* ⇔ *Growth*

An important thing worth mentioning is the difference between organizations and institutions. Organizations have a formal structure that are consciously created with an explicit purpose, like: players, actors, agents, and agencies; while the institutions develop: common

¹² Sabatier- *Policy change and learning*- 1993

¹³ Lundvall - Policy learning as a key process in the transformation of the Chinese Innovation Systems, 2005.

¹⁴ Jan Fagerberg- *The Oxford handbook of innovation*, 2006, page 487.

habits, routines, established practices, rules or laws that regulate the interactions between individuals, groups and organisations, the rules of the game.

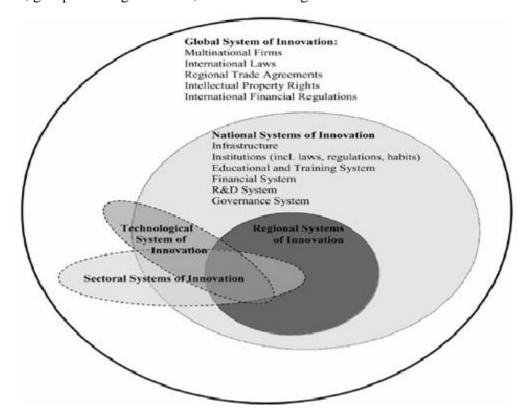


Figure nr 2. Relationships between global, national, sectoral and technological systems of innovation¹⁵

There are many types of innovation systems, some parts of others, as it can be seen in the previous figure. The one that is going to fit my case and going to be analyzed is the Regional System of Innovation, which is a part of the National System of Innovation and also of the global one.

To justify the need of explaining the knowledge need in the previous subchapter in relation to systems of innovation, the OECD clearly states that: "The measurement and assessment of national innovation systems has centered on four types of knowledge or information flows: 1) interactions among enterprises, primarily joint research activities and other technical collaborations; 2) interactions among enterprises, universities and public research institutes, including joint research, co-patenting, co-publications and more informal linkages; 3)

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¹⁵ Bjorn T. A., et al. *The Role of Regional Innovation Systems in a Globalising Economy: Comparing Knowledge Bases and Institutional Frameworks of Nordic Clusters*, 2004.

diffusion of knowledge and technology to enterprises, including industry adoption rates for new technologies and diffusion through machinery and equipment; and 4) personnel mobility, focusing on the movement of technical personnel within and between the public and private sectors. ¹⁶"

According to Doloreux, there are 4 components of the Regional Innovation System:

- 1. "Firms within a cluster (constituting the knowledge exploitation subsystem)
- 2. Knowledge infrastructure (knowledge exploration subsystem) in which universities are included
- 3. Institutions (the rules regulating the behavior of the actors in the RIS and their interaction)
- 4. Policy (intended to improve the overall innovative performance of the RIS)"¹⁷.

Todtling and Trippl have a similar point of view regarding RIS:

- 1. "Regions differ with respect to their industrial specialisation pattern and their innovation performance
- 2. Knowledge spillovers, which play a key role in the innovation process, are often spatially bounded
- 3. the ongoing importance of tacit knowledge for successful innovation has to be mentioned
- 4. Policy competences and institutions are partly bound to subnational territories" ¹⁸.

It is also considered that institutions are engaged in production and diffusion of knowledge through: "public research institutions, technology mediating organisations (technology licensing offices, innovation centres, etc.) as well as educational institutions (universities, polytechnics, vocational training institutions, etc.) and workforce mediating organisations".

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¹⁶ 23. Organization for Economic Co-operation and Development- National Innovation Systems: http://www.oecd.org/science/inno/2101733.pdf (accessed 25 September 2016)

¹⁷ B. A. Lundvall- *Handbook of innovation systems and developing countries*, 2009, page 8.

¹⁸Todtling F., Trippl M.- *One size fits all? Towards a differentiated regional innovation policy approach*, 2005, p. 1205

¹⁹ Same as previous

4.3. Clusters and economic growth

One way of improving the Regional System of Innovation and stimulate growth could be a cluster. "Clusters are geographic concentrations of interconnected companies, specialized suppliers, service providers, firms in related industries, and associated institutions (e.g., universities, standards agencies, trade associations) in a particular field that compete but also cooperate²⁰".

"Clusters are regarded as important elements in economic development" and the **benefits of**a cluster and the competitiveness generated by it can have several advantages:

- 1. "Increasing the current (static) productivity
 - Access to specialised input and employees
 - Access to information
 - Complementarities
 - Access to institutions and public goods
 - Incentives and performance measurement
- 2. Increasing the capacity for innovation and productivity growth
 - New buyer needs perceived more rapidly
 - New technological, operating or delivery possibilities perceived more rapidly
 - Pressure to innovate higher
- 3. Stimulating new business formation
 - Inducement to entry higher with a cluster because of better information
 - Barriers to entry lower than elsewhere
 - Companies located elsewhere may relocate to the cluster
 - Foreign MNEs may establish subsidiaries in the cluster to 'plug-in' 224.

Some of the **policies** towards **Regional Clustering** include:

• "Efforts to improve the generalized business environment, by reviewing tax policy, examining regulations, reducing costs of services, streamlining administration, and

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²⁰ Michael Porter- Location, Competition, and Economic Development: Local Clusters in a Global Economy, page 15.

²¹ Menzel, Fornahl- *Cluster life cycles—dimensions and rationales of cluster evolution*, 2009, page 205.

²² Same as the previous one, page 21.

maintaining a favorable business climate, often become parts of cluster development policies;

- efforts to provide information and data on business and economic trends as well as information and data on markets, customers, competitors;
- basic infrastructure, education, and training;
- Business networking and inter-firm collaboration;
- Cluster initiatives tend to have assessment and improvement of government policies and programs as an important objective".

²³ Michael Enright- *Regional Clusters: What we know and what we should know*, 2001, page 15.

5. The case of Oradea: the role of the Municipality in the regional growth and development

5.1. The role of knowledge in the Regional Innovation System

We have seen in the previous chapter how important it is for the economic agents to adapt to new circumstances, to be ready for any challenges the future may bring. In order to do that you need to be a part of a learning economy, as presented earlier, therefore changing into a learning organization on your own.

I have found this subject interesting to study not only through the perspective of the economic agents, which I have done with other occasion, but this time, through the perspective of an organization that brings and holds together successful companies and facilitates the smooth running of the economic activity in general.

Therefore, I chose to analyze the case of the Municipality of Oradea and its associates in the process of regional development and its impact to innovation and growth. One thing important to mention is that we are not looking at the municipality as an institution "rules of the game", but as an organization, which through its own collaboration with his associates, is trying to create a perfect environment for a prosperous economy.

In this analysis I am going to do a qualitative analysis by looking at all the articles written concerning this problems: What is the municipality's plan/program for 2016-2020 regarding regional development in the area? How will this contribute to the attraction of new big companies and "holding on" to the existent ones? What types of innovations are going to be made? How is the quality of life going to change for the inhabitants? Will all these lead to a regional economic growth?

The first step after having read all the articles and forming a general idea was to get into the actual plan of the municipality and see it in more detail, right from their website. Even though it has a lot of formalities and its content is ambiguous at times, I managed to find successful information to help me in my research. I am going to present next what my analysis lead me to.

As a starting point I would like to present their vision for the next 4-5 years of the city: "the city of Oradea will experience a significant development of the regional economy through the attracting capital, stimulating of investments and research& development activity, by aligning the companies to the European standards and by taking advantage of the advantageous geographical position and its specific local resources"²⁴. They want people to believe that the city is going to give them favorable living conditions with an unpolluted environment, quality public services and well-paid jobs. The city will also be included in the European circuit through its consolidation of a touristic destination with historic, cultural and natural outlook: "Oradea-Spa tourism capital of Romania", "Oradea- the Art Nouveau capital of Romania" or "The fortress of Oradea- O Meridian".

It is clearly to see that through this vision, the municipality will go forward to a mission of stimulating the prosperity and wellbeing of the inhabitants, but what about their strategic objectives and how will these work?

In short, the strategic objectives for 2020 look like this:

"Increasing the competitiveness and the economic mass of the city

- Providing a high quality infrastructure and a broader connectivity of the city
- Improving the quality of life
- Protecting and valuing the city's assets by promoting tourism
- Increasing the quality of public services"²⁵.

By looking at the strategies I initially thought that this is just general things municipalities do, but I've found later that it's more than that. The strategies are, indeed, general, but unlocking them separately, lead me to the actual policies and sectorial programs/plans. These have a wider area of explanations which also includes the actual participants to the local market, the economic agents.

Thus, the first sectorial policies and programs from analyzed are from an economic point of view.

²⁴ Municipality's official website news page: http://www.oradea.ro/stiri-oradea/primarul-ilie-bolojan-a-prezentat-strategia-de-dezvoltare-a-municipiului-oradea-in-10-pasi (accessed 9 September 2016)

²⁵ Municipality's official report towards development strategy: http://bihorstiri.ro/wp-content/uploads/2015/03/Strategia-de-dezvoltare-a-Oradiei.pdf (accessed 9 September 2016)

Before proceeding to that aspect, I want to exemplify how the municipality treated their policies compared to the traditional and theoretical aspects of knowledge and learning organizations. We can say that they took in consideration the innovation policies according to the theory presented earlier, because it:

- 1. Established the general knowledge base through investment in basic research and formal education: STI incubators, different research centers for entrepreneurs and other support structures for gathering and processing information;
- 2. Established links between public research and industry: partnerships between public and private sectors, and also internships and university-industry relationships;
- 3. Combine the promotion of R&D efforts in industry with the promotion of learning organisations: top organizations were given tax benefits through which they could use some of the tax money for R&D or other general business investments.

All these examples were presented shortly as they are going to be talked about in the second subchapter.

5.2. Economic policies oriented towards clusters

Let's take a look at how the policies towards regional clustering were adopted by the local municipality.

The **economic** development policies are mainly consisting of:

- 1. Supporting the development of Small and Medium Enterprises (SME) at the local level
- 2. Industrial development
- 3. Increasing the qualification and the adaptability of workforce

These policies are going to answer most of the research problems formulated earlier, giving broader information.

Before I go on with the explanation, I would like to re-mention the importance of knowing the difference between an institution and an organization. I am not looking at the municipality as an institution that is in charge with the laws, authorizations, and other

services, but as an organization, "a group of people brought together for a common purpose ²⁶", which is the regional development and the types of actions/measures taken in this matter.

1. Supporting the development of Small and Medium Enterprises (SMEs) at the local level- is done through four steps, which are the following:

a) The development of business support structures

Through this step, the need of support will be assured, therefore there won't be any insecurity about companies that may leave because of not having enough information, or a place where to develop their work/ present their products. What this program is bringing is the construction and full equipping of a multifunctional hall that can be used as an exhibition center.

Secondly, a helpdesk and support office for local and foreign investors will be created so that they can get all the necessary information required in order to perform a business activity in Oradea (such as: property available, the quality and quantity of the workforce, existent business infrastructure, present facilities, specific documentation, etc.).

Another interesting innovative plan going to be adopted is a pilot project that consists of creating a local minimum scheme in supporting the young entrepreneurs, creating new jobs and raising the level of salaries.

The last would be local products promotion at all the regional tourism or miscellaneous events.

b) Attracting investments/ foreign investors

The second program of economic development in supporting the SMEs is based on expanding and development of industrial parks (2 out of 4 already built), the inventory of the properties which are available for investments, establishing a new set of facilities for new investments, and promoting opportunities to invest.

c) Campaigns of informing and promoting entrepreneurial culture

The program speaks by itself and is specially addressed to promoting entrepreneurial culture among young people.

d) Supporting the activity for Research& Development and Innovation

²⁶ Scott, W. Scott. 2008. Institutions and organizations. Thousand Oaks, CA: SAGE, http://pediaa.com/difference-between-institution-and-organization/ (accessed 9 September 2016).

The first step in this program is to continue the support and keep promoting the partnerships between universities and the economic environment. The municipality has managed to do that a couple of years ago and this has benefited the both parts, as well as the local economy, which in my opinion is a smart and successful program.

The second kind of support is the one for the DIC (Documentation and Information Center) with an applicative nature, which have as beneficiaries companies from Oradea. Along with the 2^{nd} step goes the 3^{rd} one, which is continuing the development of Innovation and R&D infrastructure.

The 4th measure consists of setting up a business incubator to support small local business, innovative SMEs, IT, etc. while the last in this category is the promoting modern means of ICT (Information and communication technology) for increasing the efficiency of the economic activities.

2. Industrial development

As mentioned earlier, the plan for industrial parks is not done yet; only 2 out of 4 are being used right now. The plan consists of extending it by the development of new locations for Eurobusiness Industrial Park Oradea as well as a logistic center. It is believed that through this construction of new halls/warehouses for specific companies, the public-private partnerships will increase in any of these fields.

3. Increasing the qualification and the adaptability of workforce

This kind of policy aims at matching the supply and demand for labor force. The first way to do this is by the involvement of the active labor force in programs to increase skills as the main means of increasing labor productivity.

We see here the implication of the municipality through another plan, which is: facilitating the communication between business market and educational institution towards the necessary for specialists, as well as internships for both school and university students in the local companies.

Other measures contain evaluating the demand of the labor force market on a medium and long-term period or supporting the professional/vocational education.

The second sector of development is **the infrastructure**, where major changes are going to be made in the development of the transportation. It is wide known that if you want to make sure companies and investors are not leaving you have to fulfill their needs. Those needs also include easy, fast, qualitative and accessible roads and routes in or outside the city, to other cities or even to neighbor countries.

This is one of the reasons why the development on the infrastructural level regarding transportation has been taken seriously in consideration. Currently Oradea has a very small airport which has few flights, so the municipality decided to continue its development and extend the number of flights and destinations (inside the country and to major European cities). They are planning to do this in a partnership with County's Council.

Besides transportation improvement, there is a plan of taking advantage of the thermal water resources and its full value. Some of the measures include: studies of evaluation of the existent thermal resources, utilizing these for thermal energy supply and for accessing grant funds.

The second sector is, in some part, tied with the third one, which is the tourism.

There have been huge investments in modernizing the city for the inhabitants as well as for the local companies. The cost of the rehabilitation and modernization of the city center's architectural buildings alone was 18.9mil RON²⁷, which is more than 4mil EUR. This program was done only in 1 calendar year. The list continues with The Mushroom Hill- 2mil EUR²⁸, the Fortress of Oradea- slightly more than 19mil EUR²⁹, the Eurobusiness industrial park- estimated budget 18mil EUR.

By looking at these big amounts of money invested the first question that comes up is: where did they have so much money from? I believe administration had a vital role in this aspect because most of the money for all these projects was irredeemable money from the European Union.

Even though some of the investments were made just for the city's appearance and tourism, there are others that already paid off. For example, the Eurobusiness Industrial Park,

²⁷ City News newspaper article: http://citynews.ro/eveniment/foto-stadiul-lucrarilor-la-piata-unirii-din-oradea-proiectul-de-reabilitare-si-modernizare (accessed 9 September 2016)

²⁸ Ichim Vasilica's article on Oradea Press: http://oradeapress.ro/2015/12/28/marile-proiecte-continua-in-oradea-a-fost-inaugurata-gradina-publica-de-pe-dealul-ciuperca/ (accessed 9 September 2016)

²⁹ Ivanov Catiusa's Newspaper article Hot News: http://www.hotnews.ro/stiri-administratie_locala-20681313lucrarile-reabilitare-cetatii-din-oradea-fost-finalizate-1-ianuarie-poate-vizitata-turisti.htm (accessed 9 September 2016)

which is only half finished with 2 out of 4 established locations, has already been a major success. Many production and IT companies have already established in the area, being said that in just the 2 locations, 30 companies have made investments of 39mil EUR³⁰ so far.

It can only be a good thing when foreign companies come and invest in the areas you build for them so that they can develop their economic activity. After being established, they are going to provide a lot of jobs for the local people, leading to a decrease of the unemployment rate, more money for the state through taxes and other benefits, like public-private partnerships, or already established partnerships between the educational institutions and the organizations on the market.

The actual objective of the municipality is trying to create a cluster that will raise the added value of the products and services offered. This is a result of a problem identified a couple of years earlier: a lower number of companies than EU's average.

Therefore, the cluster policies in the analysis compared to the ones from a traditional perspective referred to:

- Efforts to improve the generalized business environment, by reviewing tax policy, examining regulations, reducing costs of services, streamlining administration, and maintaining a favorable business climate: helpdesk and support office for local and foreign investors, Documentation and Information Center;
- 2. Efforts to provide information and data on business and economic trends as well as information and data on markets, customers, competitors: promoting modern means of ICT (Information and communication technology);
- 3. Basic infrastructure, education, and training: a lot of infrastructure development projects, campaigns of informing and promoting entrepreneurial culture, expanding and developing industrial parks (2 out of 4 already built) as well as a logistic center, setting up a business incubator to support small local business, innovative SMEs, IT, supporting the professional/vocational education, increasing the qualification and the adaptability of workforce;
- 4. Business networking and inter-firm collaboration; promoting the partnerships between universities and the economic environment, facilitating the communication between

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³⁰ Ivanov Catiusa's Newspaper article Hot News http://www.hotnews.ro/stiri-administratie_locala-21125972-parcul-industrial-oradea-extins-circa-10-hectare.htm (accessed 9 September 2016)

business market and educational institution towards the necessary for specialists, as well as internships for both school and university students in the local companies.

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CONCLUSIONS

As we have seen in the theoretical chapter, knowledge has a very important role in everyday lives, even more on the organizational structure and on the economy as the whole. The municipality is trying to combine both STI and DUI methods so that innovation can have a higher outcome. Examples of this are the following: the initiative of partnership between the public and private sector combining theory with practice, business and science/technology incubators, etc. This also sums up one of the questions regarding the role of knowledge and types used.

As the economy is affected by different threats and challenges, the organizations and other actors need to change, to be dynamic and ready for unexpected outcomes, transforming into learning organizations, and the economy into a learning economy.

The municipality was engaged in a lot of learning activities before it conducted all these measures and policies. A solution they came out was a cluster. A cluster is clearly a great source of innovation and can really boost regional development, making the Regional System Innovation have a bigger impact on the national level.

Therefore:

- How can a municipality influence the economic development in the local region? The answer is through direct engagement on the market. This can only be done through a serious knowledge research. Having a professional plan and knowing how to apply it and when will give the best results. We have seen that the municipality had several policies, some of them already implemented.
- What kinds of measures were taken towards development? The municipality influenced the development in the local area by the amount of investments done in the

economic and industrial fields. They also supported the SMEs by developing business support structures, attracting investors by building what they need, campaigns of informing and promoting entrepreneurial culture, supporting the R&D and Innovation activities through university-companies relationships, increasing the adaptability of the workforce, and last but not least, making sure to have a good infrastructure that facilitates any economic activity as well as a nice city through several tourists attractions of European level.

- What are the most important aspects in obtaining and innovative environment? The most important aspect is to knowledge. Studying the market and seeing how it works and listening to the needs of the economic agents, or seeing the possible opportunities that may arise by convincing investors that its worth to come in a certain area can pay off. We can say, therefore, that the municipality has done a lot of research as it respected the theoretical aspects.
- Does the idea of a cluster work in this case? We have seen only from one example with the Euro Business parks: 2 out of the 4 were done only and they already attracted 30 companies and 39mil EUR. In my opinion, the industrial area will be "marked" as a success, but we can't conclude what is going to happen on a long run.

References

- 1. Arbnor I., Bjerke, B.- Methodology for Creating Business Knowledge, 2011
- 2. Bengt-Åke Lundvall- The economics of knowledge and learning, Aalborg University, 2003
- 3. Doloreux, D. (2002), "What we should know about regional systems of innovation"
- 4. Enright Michael Regional Clusters: What we know and what we should know, 2001
- 5. Fagerberg Jan The Oxford handbook of innovation, 2006
- 6. Jensen Berg et al.: Forms of knowledge and modes of innovation, 2007
- 7. Kuada, J.: 2012, "Research Methodology A Project Guide for University Students", Samfunds Litteratur.
- 8. Lundvall- Policy learning as a key process in the transformation of the Chinese Innovation Systems, 2005
- 9. Lundvall- Innovation and competence building in the learning economy Implications for innovation policy, 2008
- 10. Menzel, Fornahl- Cluster life cycles—dimensions and rationales of cluster evolution, 2009, page 205.
- 11. Nonaka Ikujiro A dynamic theory of organizational knowledge creation, Tokyo, 1994
- 12. Porter Michael Location, Competition, and Economic Development: Local Clusters in a Global Economy
- 13. Sabatier- Policy change and learning- 1993
- 14. Silverman, D. 1993; Neuman, L. 2006; and Bryman, A. and Bell, E. 2011
- 15. Todtling F., Trippl M.- One size fits all? Towards a differentiated regional innovation policy approach, 2005, p. 1205.
- 16. Citynews newspaper article: http://citynews.ro/eveniment/foto-stadiul-lucrarilor-la-piata-unirii-din-oradea-proiectul-de-reabilitare-si-modernizare (accessed 9 September 2016)
- 17. Denzin, Norman. K. and Yvonna S. Lincoln. Handbook of Qualitative Research. 2nd edition. Thousand Oaks, CA: Sage, 2000, http://libguides.usc.edu/writingguide/qualitative (accessed 28 August 2016)
- 18. Ichim Vasilica's article on Oradea Press: http://oradeapress.ro/2015/12/28/marile-proiecte-continua-in-oradea-a-fost-inaugurata-gradina-publica-de-pe-dealul-ciuperca/ (accessed 9 September 2016)

- 19. Ivanov Catiusa's Newspaper article Hot News: http://www.hotnews.ro/stiri-administratie locala-20681313-lucrarile-reabilitare-cetatii-din-oradea-fost-finalizate-1-ianuarie-poate-vizitata-turisti.htm (accessed 9 September 2016)
- 20. Ivanov Catiusa's Newspaper article Hot News http://www.hotnews.ro/stiri-administratie_locala-21125972-parcul-industrial-oradea-extins-circa-10-hectare.htm (accessed 9 September 2016)
- 21. Municipality's official website news page: http://www.oradea.ro/stiri-oradea/primarul-ilie-bolojan-a-prezentat-strategia-de-dezvoltare-a-municipiului-oradea-in-10-pasi (accessed 9 September 2016)
- 22. Municipality's official report towards development strategy: http://bihorstiri.ro/wp-content/uploads/2015/03/Strategia-de-dezvoltare-a-Oradiei.pdf (accessed 9 September 2016)
- 23. Organization for Economic Co-operation and Development- *National Innovation Systems*: http://www.oecd.org/science/inno/2101733.pdf (accessed 25 September 2016)
- 24. Scott, W. Scott. 2008. Institutions and organizations. Thousand Oaks, CA: SAGE, http://pediaa.com/difference-between-institution-and-organization/ (accessed 9 September 2016).