Mendel University in Brno
Faculty of Business and Economics

The possibilities of increasing the competitiveness of Czech enterprises through financing from EU funds

Diploma thesis

Thesis supervisor:
doc. JUDr. Ing. Radek Jurčík, Ph.D.

Bc. Tereza Stloukalová

Brno 2015

Acknowledgement

I would like to thank to my supervisor doc. JUDr. Ing. Radek Jurčík, Ph. D. for his valuable advices, comments and criticism during elaboration of this thesis. I would like to also thank to all leaders of municipalities who were willing to participate in my research.

Statutory Declaration

Herewith I declare that I have written my final thesis: "The possibilities of increasing the competitiveness of the Czech enterprises through financing from EU Funds" by myself and all sources and data used are quoted in the list of references. I agree that my work will be published in accordance with Section 47b of Act No. 111/1998 Sb. On Higher Education as amended thereafter and in accordance with the *Guidelines on the Publishing of University Student Theses.*

I am aware of the fact that my thesis is subject to Act. No. 121/2000 Sb., the Copyright Act and that the Mendel University in Brno is entitled to close a licence agreement and use the results of my thesis as the "School Work" under the terms of Section 60 para. 1 of the Copyright Act.

Before closing a licence agreement on the use of my thesis with another person (subject) I undertake to request for a written statement of the university that the licence agreement in question is not in conflict with the legitimate interests of the university, and undertake to pay any contribution, if eligible, to the costs associated with the creation of the thesis, up to their actual amount.

In Brno on 22nd May 2015: _____

Abstract

Stloukalová, T., The possibilities of increasing the competitiveness of Czech enterprises through financing from EU funds. Diploma thesis. Brno: Mendel University, 2015.

This thesis deals with the issue of competitiveness of Czech enterprises, concretely municipalities, which are specific type of public enterprise. In the thesis there are identified factors of regional competitiveness of municipalities suggested by leaders of municipalities and cities and regression analyses of their influence on regional competitiveness is provided. Thesis contains also proposal of measures of increasing regional competitiveness of municipalities by drawing money from EU Structural funds in accordance with the current strategy of the European Union, the Europe 2020 Strategy for smart, sustainable and inclusive growth. Moreover, project plan for municipality, with corresponds with its potential realization of the objectives of the Regional Development Strategy of the Czech Republic 2014-2020, together with the simple instructions for the applicants for subsidy from EU's Structural funds, is prepared.

Keywords

Competitiveness, Factors of regional competitiveness, Regression analysis, Regional policy, European Union, Structural Funds of EU, Czech enterprises (concretely municipalities), project plan

Abstrakt

Stloukalová, T., Možnosti zvyšování konkurenceschopnosti českých podniků pomocí čerpání ze strukturálních fondů EU, Diplomová práce. Brno: Mendelova Univerzita, 2015.

Diplomová práce se zabývá problematikou konkurenceschopnosti českých podniků, konkrétně obcí, které jsou specifickým typem veřejného podniku. V diplomové práci jsou identifikované faktory regionální konkurenceschopnosti obcí, které byly navrženy lídry obcí a měst. Dále je provedena regresní analýza vlivu jednotlivých faktorů na konkurenceschopnost obcí. Práce obsahuje také návrhy opatření zvyšování konkurenceschopnosti obcí pomocí čerpání ze Strukturálních fondů EU v souladu se současnou strategií Evropské Unie, Evropa 2020, Strategie pro inteligentní a udržitelný růst, podporující začlenění. Navíc je připraven projektový plán pro obec, která svým potenciálem koresponduje se Strategií Regionálního rozvoje České republiky pro období 2014 - 2020 spolu s jednoduchými instrukcemi pro žadatele o podporu z Evropských Strukturálních fondů.

Klíčová slova

Konkurenceschopnost, faktory regionální konkurenceschopnosti, regresní analýza, regionální politika, Evropská unie, Strukturální fondy EU, české podniky (konkrétně obce), projektový plán.

Content

List of figures

List of tables

List of abbreviations

CSO – Czech Statistical Office
ESI funds – European Structural and Investment funds
MEP – Municipality with extended powers
MRD – Ministry for Regional Developement
RCI – Index of regional competitiveness

1 Introduction

Increase competitiveness, as we all know, is a path to economic nirvana. Of course it is the main point of interest of any economy. This term is often used by politicians, economists, businessmen and when the Czech Republic joined the EU in 2004, Czech enterprises and of course also municipalities which represents specific group of public enterprises, got a chance to try to increase their competitiveness through drawing money from EU funds for their projects. One of the EU's goals has always been to develop poorer regions among the Union and regional policy of the EU, also called economic and social cohesion policy, is a reflection of this principle of solidarity inside the Union.

This policy and for example also existence of high-powered Competitiveness Advisory Group which reports to the European Commission (Jacquemin and Pench, 1997) is evidence that EU has an interest in increasing competitiveness of its regions. But there is precious little agreement either on what the term 'competitiveness' means how can be identified or how policy should aim to enhance it. There are no precise instructions or 'right' sort of instructions which should a particular economy keep to be competitive. And what is more globalism and new technologies rises every day which results in dynamism of competitiveness. It is why leaders need to respect all new opportunities and threats that arise every day to stay competitive and joining EU was a nice example of partly opportunity for someone or on the other hand also a threat for somebody else.

Many factors influence urban performance from national or supranational level. These factors can be hardly influenced by cities and municipalities. But on the other side equally, the performance of the cities in a region will have a considerable influence on its overall economic success, meaning that the efficiency and well-being of the cities are of national concern. Urban performance from supranational level can improve EU and its cohesion policy applied through multiannual financial perspective which goes hand by hand with EU's budget. This policy can help to improve the competitiveness of its parts in a 'top-down' way. Key tools for cohesion policy application are Structural Funds and Cohesion Fund. Current programming period started in 2014 and last till 2020.

2 Objectives of the thesis

In 2010, new long term EU's strategy called "Europe 2020" started. This strategy is not only about overcoming the crisis which started in 2008 in Europe it is more about addressing the shortcomings of our growth model. Goal of this strategy is to create smart, sustainable and inclusive EU's economy. These three mutually reinforcing priorities should help EU and the Member States deliver high levels of productivity, employment and social cohesion. These three factors have a huge influence on the competitiveness of the EU's member states, regions, municipalities or enterprises and this thesis "The possibilities of increasing competitiveness of Czech enterprises though financing from EU funds" will focuses on them.

The main goal of the thesis is to identify factors of regional competitiveness of Czech municipalities, which are a specific type of public enterprises and accounting and tax units at the same time, and to propose measures and recommendations for the municipalities, how to improve their competitiveness by drawing money from EU funds in accordance with the current strategy of the EU, the Europe 2020 for smart, sustainable and inclusive growth. Factors of competitiveness will be identified from the point of view of the leaders of municipalities and their influence on regional competitiveness will be analysed.

Afterwards, based on knowledge of regional competitiveness factors, there will be prepared project plan for municipality, which corresponds to its potential realization of the objectives of the Regional Development Strategy of the Czech Republic 2014-2020. Simple instructions for the applicant that can help him to orientate in process of drawing money from Structural Funds will be included. Project plan will be subsequently forwarded to representatives of the chosen municipality.

The benefits of the diploma thesis can be expected in several levels. First, research of current regional policy of European Union and basic legislation of regional policy in the Czech Republic including research of literature devoted to competitiveness and evaluation of competitiveness of Czech municipalities. Secondly, identification factors of competitiveness of Czech municipalities from the local point of view based on the theoretical background. Thirdly, compilation of simple instructions for applicant for EU subsidies and preparing project plan for municipality which is planning to co finance its investment from Structural funds. And last but not least benefit is also developing a proposal of measures to increase the regional competitiveness of the Czech municipalities.

3 Literature overview

3.1 EU Regional policy

Regional Policy of the European Union, also called economic and social cohesion policy (ESC), or shortly cohesion policy, is a reflection of the principle of solidarity inside the EU. The richer states contribute to the development of the poorer countries and regions to improve the quality of life of the residents throughout the Union. By 1975, national governments ware responsible for their regional policies. But during the process of deepening integration and enlargement of EU, regional policy became cross-border task. (Turok, Ivan, 1997)

Existence of Regional Policy is justified by four main reasons. Economic argumentations are full use of production factors or economic growth. Social reasons for regional policy, which are nearly connected to political reasons, can be full employment, regional income distribution and public welfare. Strong disparities in the social sector have a significant impact on the election results and political situation. Environmental argumentation claims that benefits of regional policy take place not only in underdeveloped regions, but the benefits are evident even for densely populated agglomerations with high economic performance. (Gore, 2010)

Regional policy instruments can be seen from macro or micro economic point of view. Macroeconomic instruments may be fiscal and monetary policy. Microeconomic tools are in the form of subsidies to specific purposes, reallocation of factors of production. It can be tools affecting the allocation of manpower or capital, meaning influencing creating jobs in the region. Other tools of regional policy are the administrative ones (administrative measures) or institutional instruments (creation of agencies, etc.). (Bache, 1998) The central authority in Czech Republic in the field of regional policy is by the Law no. 2/1969 Coll., "On the establishment of ministries and other central government authorities of the Czech Republic" (in amended by Act no. 110/2007 Coll.), the Ministry for Regional Development.

Municipalities are the basic unit of regional development. They create the conditions for life and business. They are most often implementing projects to promote regional development. Competitiveness of the regions, municipalities, is influenced by disparities among them. The problem lies in the formation of problem regions, regions with high unemployment, poor economic performance or bad environment. Causes of formation problem regions could be inadequate equipment by natural resources, insufficient use of their own resources or focusing on stagnant sectors. These regions have a negative impact on states economic development and may create social and political conflicts. The reasons for regional disparities among EU are economic and non-economic factors, low mobility of labour, capital, geographical factors (remoteness, lack of natural resources, etc.), poor economic structure of the region, institutional factor and demographic situation (educational conditions). (Martin, 2006)

3.2 Basic legislation of regional policy of the Czech Republic

The basic for regional policy is Article 99 of the Constitution of the Czech Republic, which creates a constitutional basis for the existence of municipalities and higher territorial administrative units. The Constitutional Act no. 347/1997 Coll., On the creation of higher territorial units, then establishes the existence of these 14 units with effect from January 1st 2000. The key general standards are laws no. 128/2000 Coll., On municipalities (Municipal Establishment), and no. 129/2000 Coll., on regions (regional government).

Essential is also Act no. 2/1969 Coll., On the establishment of ministries and other central government authorities of the Czech Republic (as amended by Act no. 110/2007 Coll.), The so-called. Establishment Act, which provides for a central authority in matters regional policy, the Ministry of Regional Development [Section 14, para. 1]. In this area, the Ministry "a) administers funds to housing policy and regional policy of the state, b) coordinate the activities of ministries and other central government in housing policy and regional policy of the state, including the coordination of financing these activities, if these resources directly manage ". It also "provides information methodological assistance to higher territorial authorities, municipalities and their associations and organizes activities associated with the process of involvement of local governments in the European regional structures."

The supporting standard of the regional policy is Act no. 248/2000 Coll., On regional development support, which specifies the promotion of regional development, selected tools and scope of the main actors. In § 11, para. 1 details the responsibility of the Ministry for Regional Development. Many measures are also regulated by Law no. 47/2002 Coll., On support for small and medium enterprises. (Metodická podpora regionálního rozvoje, 2013)

3.2.1 Municipality

Czech Republic is administratively divided into 14 regions (NUTS 3), 77 districts (NUTS 4) and 6254 municipalities (NUTS 5). NUTS is the basic territorial unit EU. (Veřejná zpráva, 2014)

The municipality is by the Act no. 128/2000 Coll. On municipalities, the basic territorial self-governing community of citizens; forms a territorial unit, which is defined by the border territory of the municipality. The municipality is a public corporation, has its own property, acts in legal relations on its own behalf and bears responsibility arising from these relations. The municipality takes care of the overall development of the territory and the needs of their citizens, while performing their tasks also protects the public interest. The municipality, which has at least 3,000 inhabitants, is a city where so on the municipality, the chair of the Chamber of Deputies after hearing the government. The village is administered by a municipal council; other municipal bodies are the municipal council, the mayor, the municipal authority and special municipalities. From this definition can be seen that

municipality is a special type of enterprise, with its own budget and administers its affairs independently.

3.2.2 Subsidy

When the Czech Republic joined the EU in 2004, Czech enterprises got a chance to draw money from EU funds. But what is the subsidy in Czech legislation?

The term “Subsidy” is in the Czech legislation defined by Act no. 218/2000 Sb., budgetary rules. In the context of § 3 there is determinate: "for the purposes of this Act grants/funds/subsidy mean finances from state budget, state financial assets or the National Fund provided to legal entities or physical persons for the stated purpose "(Act no. 218/2000 Coll., budget rules)

The concept of subsidy is also further anchored in international accounting standards, particularly in IAS 20. IAS 20 distinguishes grants related to assets which are “government grants whose primary condition is that an accountant entity qualifying for them should purchase, construct or otherwise acquire long term assets. There can also be set additional conditions restricting the type or location of the assets or the periods, during which the assets should be acquire or held.” And farther grants related to income, which are “government grants not related to assets” (International Accounting Standards, IAS 20). In practise grants related to assets can be understand as investment subsidies, meaning subsidies granted for purpose of buying fixed assets, and grants related to income as operating subsidies.

3.3 European social and cohesion policy

According to the European regulations, ESC has been applied through multiannual financial perspectives. Programme period lasts seven years. Last year new programming period (2014 – 2020) begun. In the previous programming period 2007 – 2013 there were determined three main goals: convergence, regional competitiveness and employment and the third pillar of ESC was territorial cohesion, thus promotion territorial coherence and cohesion of the Union. An important role in this context also included cross-border, transnational and interregional cooperation. In compliance with the European Commission’s third and fourth cohesion report, regional policy focused on implementing the Lisbon Strategy. Along with an emphasis on sustainable growth, innovation and competitiveness, the creation of an open, flexible and cohesive society with high employment was at the centre of interest.

ESC policy, alongside agricultural policy, belongs to the most important European agendas, and the European Union spends more than a third of its common budget on it. (European Commission, 2014)

3.3.1 Structural Funds

The Structural funds are important part of regional policy of the EU. In the programming period 2007 – 2013 total resources of the EU funds were represent by € 347 billion. For the Czech Republic there was assigned € 26, 69 billion. For the current programming period it is assumed budget smaller by € 30 milliards.

Money from the Structural Funds is distributed from funds:

- **European Regional Development Fund, ERDF**: strengthening the economy, supports "hard" investment projects
- **European Social Fund, ESF**: supports activities in the areas of human resources (employment, education), so-called "soft" non-investment projects.
- **Cohesion Fund** – from this fund can draw whole nations on large infrastructure projects.

Less known are the funds the **European Agricultural Fund for Rural Development (EAFRD)**, which provides money for agriculture, food and forestry, or **European Maritime and Fisheries Fund (EMFF)**, which aims to ensure the sustainability of European fisheries. Last two funds have are involved in cohesion policy of EU since 2014.

European regulations set out conditions for the use of these funds. Concrete strategies and areas of drawing EU funds are defined by National Strategic Reference Framework, which has been processed by all Member States, and subsequently approved by European Commission.

ESC's objectives are met through individual operation programs, which are also defined in the National Strategic Reference Framework. (Ministerstvo pro místní rozvoj, 2014)

Regulations of Structural Funds of EU are governed by following legal regulations (Centrum pro regionální rozvoj ČR, 2011):

- Council Regulation (EC) no. 1083/2006 of 11 July 2006 laying down general provisions on the European Regional Development Fund, European Social Fund and the Cohesion Fund and repealing Regulation (EC) no. 1260/1999
- Regulation of the European Parliament and Council Regulation (EC) no. 1080/2006 of 5 July 2006 on the European Regional Development Fund and repealing Regulation (EC) no. 1783/1999
- Regulation of the European Parliament and Council Regulation (EC) no. 1081/2006 of 5 July 2006 on the European Social Fund and repealing Regulation (EC) no. 1784/1999
- Council Regulation (EC) no. 1084/2006 of 11 July 2006 on the Cohesion Fund and repealing Regulation (EC) no. 1164/94
- Regulation of the European Parliament and Council Regulation (EC) no. 1082/2006 of 5 July 2006 on a European grouping of territorial cooperation (EGCC)

3.3.2 News in current programming period 2014-2020

Compared to the last programming period there occurred in the pumping system from European funds some innovations, both European and Czech level. Ministry of Regional Development of Czech Republic sums up the important news. Among the most important are innovations belongs expanding the number of participating funds (newly European Agricultural Fund for Rural Development, EAFRD, and European Maritimes and Fisheries Fund, EMFF).

There was set system of pre-conditions and measurability of contribution of the supported operations is higher (emphasis on the achievement of indicators). Newly there is taken into account financial dependence on the speed and quality of drawdown.

In the Czech Republic the main novelties include mainly reducing the number of programs (reducing the number of thematic operation programmes and the establishment of an integrated regional operational program instead of the original seven regional operation programmes). The concept of single methodological environment was presented and ensures the same rules throughout the entire system. Last innovation is advanced functioning of monitoring system (simplification of administrative, the applicant does not need to print any paper). (Ministerstvo pro místní rozvoj, 2014)

According to current strategy, 3 categories of regions were identified:

1) Well-developed regions, where EU is involved up to 50 % in financing projects;
2) Transition regions (new category), EU is involved up to 60 %
3) Less-developed (below 75 % of GDP/capita), EU is involved up to 85 %, in the Czech Republic all regions except Prague belong to this category;

+"Safety net" for a successful regions from previous programming period.

Table 1 Architecture of cohesion policy: comparison between programming periods (EU, Evropská komise, 2011)

Cohesion policy: architecture					
2007-2013		**2014-2020**			
Goals:	**Funds:**	**Goals:**	**Categories of regions:**	**Regions in Czech republic**	**Funds:**
Convergence	ERDF, ESF	Investments into economic growth and employment	Less-developed	all except Prague	ERDF,ESF
Regional competitiveness and employment			Transition regions	none	
	Cohesion Fund			none	Cohesion Fund
			Well-developed	Prague	ERDF,ESF
European territorial cooperation	ERDF	European territorial cooperation			ERDF

3.3.3 Operation programs for 2014 – 2020

For the next programming period 2014-2020 are prepared new programs, which will be co-financed from the European Structural Funds and Investment fund (ESIF). The process of preparing programs runs concurrently at EU and national level.

The programs were developed in response to 8 thematic areas established at the national level, which represent the "transmitter" between the level of national development priorities and objectives and priorities of individual programs. These circuits are based on a duly substantiated problem analysis prepared by ministries, regions and representatives of towns and municipalities and they were subjected to a long, thorough and detailed debate and systematic verification needs of the partners. (Ministerstvo pro místní rozvoj, 2014)

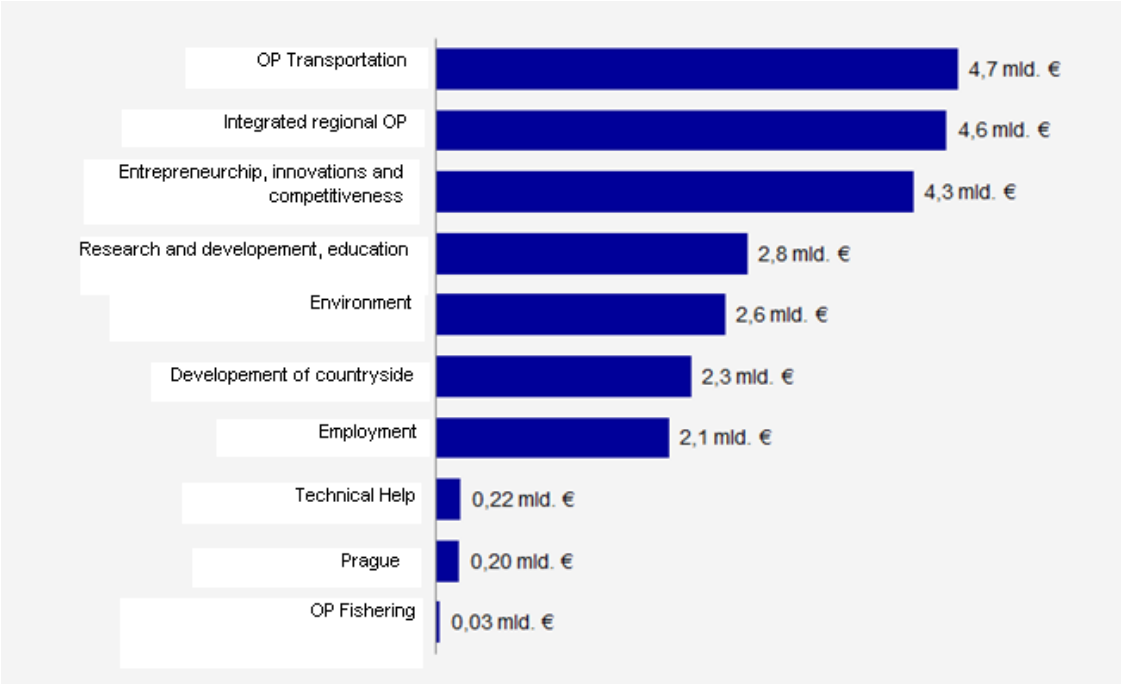


Figure 1 Allocation finance resources from ESI funds among operation programs for 2014 - 2020. (Ministerstvo pro místní rozvoj, 2014)

Programs for the programming period 2014 - 2020 were defined by Government Resolution no. 867 from 202-11-28 and include the following programs:

- OP Enterprise and Innovation for Competitiveness, managed by the Ministry of Industry and Trade;
- OP Research, development and education, managed by the Ministry of Education, Youth and Sports;
- OP Employment, managed by the Ministry of Labour and Social Affairs;
- OP Transportation, managed by the Ministry of Transport;
- OP Environment, managed by the Ministry of the Environment;

- Integrated Regional OP, managed by the Ministry for RD;
- OP Prague - Czech pole of growth, driven by the City of Prague;
- OP Technical Assistance, administered by the Ministry for RD;
- OP for Fisheries 2014-2020, managed by the Ministry of Agriculture;
- Rural Development Program, managed by the Ministry of Agriculture;
- Interregional operation programs, managed by the Ministry for RD; and others.

Full list of Operation programs with its managing authorities can be seen on web of Ministry for RD: European Structural and investment funds, 2014.

3.4 Process of drawing money from EU funds from applicants perspective

Procedure for obtaining grants from the Structural Funds involves a few basic steps - from creating the project plan, determine the appropriate operational program for processing itself and submission of the grant application. The entire process is then continued implementation of the subsidized project, which bind to certain obligations arising from the rules laid down for projects financed by the Structural Funds.

Any entity wishing to apply for financial support from EU funds must submit project to managing authority of the operational program. MAs are the highest powers in case of providing subsidies in individual countries. Their task is to supervise correctness of management and implementation of the program in accordance with national standards and regulations of the EU. These governing bodies are covered by the National Authority for Coordination which oversees the implementation of the National Strategic Reference Framework. MAs are represented by relevant Ministries. (Ministerstvo pro místní rozvoj, 2014)

3.4.1 Conditions for applicant of subsidy

In general terms, any applicant for a grant from EU funds must meet the following conditions:

- Be a citizen of the Czech Republic with permanent residence (valid for individuals) or have a seat of company in the Czech Republic (legal entity).
- To be registered in the Commercial Register, registered by trade authority or to be registered by another legal entity registered in the Czech Republic.
- To by registered as a payer of income tax to the relevant tax authority.
- It is required to submit a business license in the Czech Republic, in the case of business entities.
- Fulfil no debt condition (must have settled all its obligations towards Czech authorities).
- Not to be placed in bankruptcy or liquidation.
- Have at least two closed accounting period (unless stated otherwise in the program) and during this period must be the taxpayer.

- Not having ordered ineligibility by administrative or judicial authority. (Hrdý, 2006 and Centrum pro regionální rozvoj ČR, 2011)

3.4.2 Project application

Generally, from the EU funds there are supported projects that will contribute to improving the social and economic environment in the Member States and their regions. The recipient must prove and specifically demonstrate the usefulness of their intention.

Public benefit here is, however, understood in a broad sense, not only as a social activity. Therefore, gaining support from European funds does not exclude private companies applying for subsidies, for example for new technology, staff training, etc. However, all applicants must certify that the project application overlap of social activities planned their project. For private companies it can be boosting of employment in the region. (Ministerstvo pro místní rozvoj, 2014)

By European development agency, 2014, the key to drawing subsidies are well-elaborated projects. The project is document attesting to the applicant's activities contribute to the objectives set out in the Operational Programme and thus the implementation of the EU's economic and social cohesion. Within the Structural Funds there are having priority those projects that involve land development as a whole, solve complex problems of rural population, protection of environment etc. Every good project must contain clearly defined business intention.

The first important thing is to find out which operating program is relevant in case of the specific project. Applicant can follow the sphere of his activities (thematic OP) or places where he conducts its activities (regional operational programs, programs for Prague and cross-border cooperation programs). The project must be consistent with the objectives of the operational program, from which the applicant shall wants to draw subsidy.

A guide when creating an application for the grant are guidelines for applicants and further methodologies prepared by corresponding operational program. Also consultation with staff managing authority or intermediate body of the operational program, seminars, conferences etc are available.

The project application is submitted in electronic form. Essentials parts of each project application are described in the specific Call of the Operational Programme. These calls are mediated by MAs in announced terms. An example of the key points in the project application is as follows (Ministerstvo pro místní rozvoj, 2014):

- **Name of the project** - captures the content of the project.
- **Compliance with the objectives and priority challenges of the axes**- one of the key conditions for successful project.
- **Experiences of the implementers and partners with similar projects** - significantly influences score of the project.
- **The composition of the team** - experiences of people and their job description.

- **Definition of project objectives** - clearly defined outputs, which should be achieved after finishing of the project and evaluation of the benefits.
- **Project Management** - a description of management methods and processes in different phases of the project.
- **Implementation** - description of the implementation points step by step.
- **Indicators** - a numerical representation of the output of the project in its different phases and in the end of the project.
- **Timesheet** of the project.
- **Budget** – specification of the cost in prescribed structure and form.
- **Sustainability of the project** - a description of the activities to ensure the functioning of the project after its completion without EU funding.

Project application should be followed by (Centrum pro regionální rozvoj ČR, 2011 and ministerstvo místního rozvoje 2014):

- **Cost-Benefit Analysis** - the methodology for evaluating what positive project brings and what conversely takes both from financial and social point of view.
- **Feasibility study** - analyses designed to assess the feasibility and viability of the project. Describes the financial aspects of all activities and assesses the effectiveness of expenditure. Usually has a range of 20-50 pages. This document is mandatory and objectives set out therein, will have to be met, otherwise the subsidies can be removed. For projects less costly or so called Soft projects (non-investment) simplified feasibility study is required. When it comes to more expensive, generally investment projects, standard feasibility study must be prepared.
- **Logical framework** - clearly map out the intentions of the project, its expectations and it is bringing them into line with specific outputs and activities during implementing the project. It is process through which applicant is able to briefly, clearly and comprehensibly describe the project in a very small space. Logical framework serves as an instrument for recipients of ongoing monitoring implementation of the project. It is a tool for planning, implementation and evaluation of the project. It contains list of project's outputs, purpose and assumptions. Logical framework consists of four columns represent by vertical logic of the project - Target Tree, objectively verifiable indicators, resources (information) to validate, risks/assumptions that underlie achievement of results and project goals .

Project applications which fail in all required attachments are frequent mistakes which may lead to the rejection of applications.

3.4.3 Project types

According to the material structure we can distinguish between two types of projects:

- One-thematic (focused exclusively on a single substantive issue).
- Cross-thematic (associate more substantive issues at the same time).

According to the amount of financial support:

- Small (aid amount is 0.5 mil - 2 mil CZK)
- Large (amount of support is 2 mil - 20 mil CZK)

According to the factual orientation of funds:

- Investment (focusing on investments in tangible and intangible property)
- Non-investment (focusing primary on investment in HR)

Depending on the length of the solution:

- Short-term (projects up to 1 year)
- Medium-term (2-4 years)
- Long-term (over four years)

The project plan in the practical part of the thesis is focused on the investment project and for that reason significant theoretical requirements for investment project will be described (Centrum pro regionální rozvoj ČR, 2011)

3.4.4 Phases of the project

Each project can be divided into several phases, see figure 2. From the EU funds it is possible under certain conditions, to raise subsidy for the preparation and implementation of the project. Operating expenses are supported in isolated cases, and therefore it is very important to analyse financial flows in all phases of the project. (Fotr, 2005 and Tauer et al., 2009)

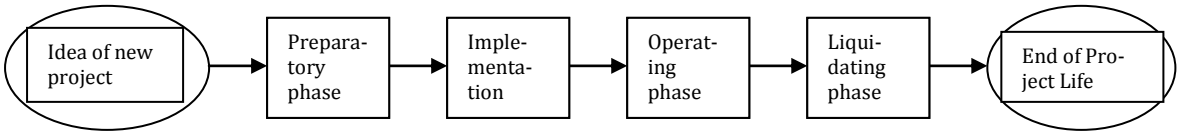


Figure 2 Phases of the project (Fotr, 2005 and Tauer, et al., 2009)

Idea of new project stands at the beginning of the birth of the project. It includes an initial idea of the project and its gross outline. Very important at this stage is a thorough analysis of the situation, whether it is possible that project to be financed from EU funds. It is recommended to consult a project plan with the managing authority of the OP, or at least with people which have had some experience in this field. If the project is compatible with an existing OP, preparatory phase of the project follows. To organize applicant's thoughts can serve the project plan or more detailed "Project fiche" which describes the basic idea of the project, designed the way it is financing, but also outputs, results and impacts of the project.

The preparatory phase of the project is the stage in which they are processed studies, project documentation and the entire project is prepared. Complete application must be submitted to the appropriate place to by Call the set deadline. During the evaluation of the project firstly are checked all the formal requirements of an application and it is decided whether the project is acceptable for the program. In the next stage applications are evaluated based on predetermined evalua-

tion criteria and scoring. At the end of the project application is rejected, or approved.

The implementation phase it is the period when the project activities are financed from EU funds. (e.g. the purchase of land and technology, recruitment of qualified personnel, launching etc.) Realization phase usually begins with decision of the admissibility of the project and signing the grant agreement. Sometimes this phase is already partially included in the preparatory phase - depending on specific conditions and calls and OPs.

Implementation of the project must comply with all applicable procedures, because the project is funded from public sources and must follow the rules set for the projects financed by the Structural Funds. This is primarily the compliance for the selection of suppliers, as well as the rules governing the publicity, the principles for management and preservation of documents related to the project and project monitoring. Necessary information can be found in the manual for applicants.

After completion of the physical implementation of the project (or individual stages of the project) grant recipient submits a request for payment and the **monitoring report**, illustrating what and how has been already done and how are the indicators set in the project application fulfilled, followed by administrative and physical control of the project. If all pre-defined conditions for the operational program are fulfilled, the applicant got the subsidy.

Operational phase usually begins after completion of project financing from EU funds. For this reason it is sometimes called "project sustainability". It is a critical period of project life, because inefficient operation can completely destroy efficient construction phase. Applicant commits to maintain the output of the project is financing agreement. Operational phase of the project and its effects must be recognized for five years, or for three years (SMEs) from the date of completion of the implementation phase. Failure to comply with conditions of sustainability may lead to requirement of returning the financial support or its part.

Liquidating phase, also called the post-operational phase, represents the final phase of the life of the project. When evaluating the economic efficiency of the project there should be considered also the potential liquidation costs, and sometimes the need to create reserves. These aspects may have an impact on project cash flows during operation, and thus indicators of economic efficiency of the project. (Fotr, 2005 and Taur et al., 2009, and Ministerstvo místního rozvoje, 2014)

3.4.5 Budget

In all cases of the submission of the grant application, it is necessary to develop a budget in several forms. Budget need to prepare by financing sources and by type of costs that will be applied in the project. Budget is one of the key documents of the grant application documentation. During budgeting it should be noted that the reported financial data are planned, while the maximum permissible values. This means that it is not possible (ignoring documentation shifts allowed) exceeded. It is also true that applicant does not automatically qualify for financial amounts

listed in the budget. All amounts paid shall be followed by finance documents and evidence of actual implementation activities. It is recommended to have "in reserve" financial volume amounting up to 100% of project costs to avoid problems with insolvency. (Ministerstvo místního rozvoje, 2014 and Centrum pro regionální rozvoj ČR, 2011)

Funding from the Structural Funds is distinguished by eligibility of the **cost** on the **eligible and ineligible**. In the budget these two types of costs has to be appropriately and clearly distinguished from each other.

Eligible costs are paid from the Structural funds. When the eligibility of the costs is not determined by EU Commission National framework does. In practice, the applicant is governed by specific rules of managing authority of the operational program. Ineligible costs are costs that cannot be financed from the Structural Funds. Applicant must always pay from his own funds. (Centrum pro regionální rozvoj ČR, 2011)

During budgeting applicant must be aware that finance from EU funds only supplements costs of the project. It is true that the level of support from the EU Funds must be equal to or lower than the permissible level of public support stemming from legal regulations of EU. If the applicant is business orientated, the rate of co-financing projects of by EU is 50 % - 60 %. For public entities (municipality, regions, and non-profit organizations) this rate can be up to 85 %. And educational projects and projects of social nature can receive 100% of the cost. (Centrum pro regionální rozvoj ČR, 2011)

In case that EU within negotiations on granting reduce its financial contribution on the project costs, financing from own resources need to be high enough to cover other costs. After finishing of the negotiations and signing a contract the project can no longer be changed and if final cost of the project implementation rises over budget, no additional support is given to applicant. For these reasons, it is very smart to introduce monitoring of the effectiveness and cost-efficiency during various stages of implementation, and its optimization. (Ministerstvo místního rozvoje, 2014)

3.4.6 Alternative sources of funding

From the previous chapter it is known that subsidies from Structural funds for investment projects do not cover the entire cost of the project. It is necessary to think about alternative sources of funding to cover total costs. In this context, there is distinguished equity and borrowed capital of companies.

The own finance sources, equity, include for example capital, profit and reserves. The advantage of equity is that it does not produce future cost of capital and does not increase the total liabilities of the company.

Using borrowed finance sources is in fact a debt capital financing. Among other sources of financing belong bank loans, leasing and bonds. Funding projects from EU Structural funds belongs to other sources of funding, but it is not debt financing, but rather subsidy. In case of debt financing entities need to be aware that they will have to repay the amount borrowed, either through regular instalments

or a lump sum at the end of maturity and regularly during the whole time of repayment they must pay capital interest as a reward for service rendered. One advantage of this method of financing is that interest is tax-deductible and reduces the tax base. Meaning it is cheaper than equity but more risky source of financing. (Režňáková, 2008)

3.4.7 Evaluation of effectiveness

The purpose of the evaluation of the investment project is to assess the payback of resource invested by the provider. Key for decision making is when, and in what amount he is the investment repaid. There are prepared project plans to convince potential investors of the benefits of the project. Project plan should be created in the way which fulfils best the conditions of the investor. When it comes to projects financed from EU funds applicant must realize that the business plan is assessed by an official who is not a specialist in the field and strictly follows prescribed items. The basic key for success is the adoption of a project application, in this case, is to correctly and completely prepare project application by appropriate Operation plan and its Call including expected results at the output and their real justification. Two types of the effects of the investment projects can distinguish (Tauer et al., 2009):

- **Effects monetary expressible**

They are used mainly in the business sector. This is the profit from investments, cash income from investments and cost savings. The word cash income can mean earnings with depreciation, the increase in net working capital etc.

- **Effects monetary inexpressible**

These are difficult expressible effects. These effects include the creation of new jobs, contribution to improving the environment, etc. On the other hand, it is strived to express such effects as far as possible in any suitable manner.

If for example the already mentioned effect of creating new jobs is considered, it can be understood as the sum of savings. Savings occur e.g. in connection with non-payment health and social insurance and state unemployment benefits. As mentioned above, each successful project is also accompanied by a careful financial planning and analysis. Financial analysis provides an overview of future inputs and outputs, cash flows and project's pricing. Financial analysis helps to decide whether the investment plan is meaningful, or not. In order to meaningfully compare and interpret these results, necessary mathematical indicators so called criteria indicators are necessary. Tauer et al. describe Net present Value, Profitability Index and Payback method as possible indicators of effectiveness of the investment.

3.5 Competitiveness

When the Czech Republic joined the EU in 2004, Czech enterprises got a chance to draw money from EU funds for their projects. Process of drawing money from EU

Funds was described in the previous chapter. But because main goal of this thesis is to find out the factors of competitiveness of Czech enterprises (concretely municipalities) and possibilities to increase their competitiveness through financing their projects from EU Funds, in this chapter there will be defined the terms “competitiveness”. What is the competitiveness in OECD eyes and how is the competitiveness defined by different economists and what are the factors of competitiveness by various authors.

Term competitiveness is very abstract and nowhere exist a generally used definition because every economists and author defines it differently.

Stéphan Garelli said in 2009: “Competitiveness is like a horse race. It is not about running faster today than yesterday. It is about running faster than all the other horses.”

Competitiveness (from the Latin concurrere - "keep together", "run together") is a key the term of this thesis, and it is therefore essential that this term must defined with adequate care and expertise. The following subchapters are therefore devoted to a detailed promotion of this concept.

Generally, the competitiveness of the economy is characterized by a term which expresses country's ability to penetrate their goods and services to foreign markets and gain comparative advantage from international exchange. Competitiveness of the economy is not narrowly defined phenomenon, which could be measured by a single indicator of competitiveness. It is a complex reality, some of the factors can be quantified but some have qualitative character and are immeasurable. (Wokoun, 2010)

OECD (2007, 2008) defines competitiveness as "the ability of corporations, sectors, regions, nations and multinational units generate high level of income of the factors of production and relatively high level of their use at a sustainable level, while pressure of international competition. "

Theoretical, methodological and practical issues of competitiveness in terms of the competitiveness of enterprises are in economic theory, a well-defined. But it is not the case of regional competitiveness. Although it should be mentioned, that it is the regional dimension of competitiveness which is in the analysis and theoretical works strongly emphasized. This is related to the knowledge, that regions are the foundation of national competitiveness because on the regions’ level, there is a direct conflict between creators and users of knowledge. Prosperity of the region (Corvers, 2003) depends primarily on how the region succeeds in overcoming the possible gap between these two groups of subjects.

The European Commission (European Commission, 2004) defines regional competitiveness as the ability of regions facing international competition to produce relatively high levels of income and employment. If we accept this definition, among the best indicator of regional competitiveness belong GDP per capita, level of employment and productivity.

Defining the concept of regional competitiveness is not yet clearly finished and is therefore unsatisfactory. However a series of regional competitiveness definitions exists and they are based on several approaches:

• Regional competitiveness as aggregated business competitiveness,
• Regional competitiveness as derived macroeconomic competitiveness.

The first approach (Tvrdoň, Šuranová, 2007) is based from the fact that in the region there are firms that consistently and profitably produce products that meet the requirements of an open market in terms of price, quality, etc. Basically, it is assumed that the interests of firms and the region, in which they operate, are similar. However, difficulties to maintain such an idea occur, when we realize that firms seek to achieve productivity and profit, while the concept regional competitiveness must also include employment. The point is that although in each region operates enterprises with different levels of competitiveness in its sector, there are some common features of the region that have an impact on the competitiveness of companies seating in the region.

The second approach is based on the fact that some of the laws applied in international trade do not work on sub-national level. For example exchange rates differentials and ratios of price and wage changes at the regional level either do not exist or do not work. On the other hand, the transfer of mobile factors (capital, labour) between regions can be a real threat for the regions (Camagni, R., 2002).

Capello and Nijkamp (2009) reported that competitiveness of regions, cities and municipalities are an important part of the theory of regional development. They stress that local specifics and local material and non-material assets has become a strategic factors of region's competitiveness. Local competitiveness lies in the local trust, a sense of belonging over the net capital capability; more creativity than pure qualified labour; the connectivity and links more than pure availability; more local identity than local effectiveness and quality of life.

Danilov (2007) defines two types of interregional competition:

• Vertical - as a competition between different levels of government - Regional and central, characterized by different competence and allocation of financial resources;

• Horizontal - competition between regions. The object of the competition here is everything that can be used as real or potential source of income - economic and natural resources, sales markets, consumers, labour, capital, knowledge, technology, property investment.

Important areas by Danilova (2007) affecting competition between regions are:

• Maintaining and attracting population, especially in the productive aged and highly qualified.

• Conservation and development firms, attracting new firms, especially those which help to form the clusters and have sustainable sales of their production, working on the principles of mutual benefit with its environment.

• Attracting new investment and development of existing or creation of new firms, municipal infrastructure, housing and social ties.

• Development and implementation of transport functions (within the region and transit).

• Strengthening market specialization of the region and its important centres.

• Development of systems of vocational training and health as a special sector, particularly universities, medical centres and clinics.

• Attracting and developing IT firms, mass media, film and television studios, etc.

• Attracting visitors to all types of tourism.

• Organization of major cultural, political, scientific, sport and other events, which strengthen the positive image of the region.

• Growth of cultural and historical potential, which increases attractiveness of the region for residents and visitors.

• Establishment of administrative and public bodies, institutions and state funds, international or global significance.

3.5.1 Factors of competitiveness

Regional competitiveness can be characterized by set of economic, social, political, environmental, organizational and other factors. The optimum would be to create one synthetic indicator characterizing regional competitiveness. The point is that synthetic indicator should adequately reflect regional level of competitiveness and also allow comparisons of different regions. Unfortunately so far, such synthetic, generalising indicator of competitiveness, which would be generally accepted, has not been defined. Basically it is consequence of the fact that there is no universally applicable methodology for evaluation of regional competitiveness.

Huggins (2003) in his article presents the so-called "Competitiveness Index" for the case of UK. This index reflects measurable criteria for local competitiveness. They are trying to fill a gap in research competitiveness, because most professional studies dealing with this issue tends to explore factors and indicators of competitiveness independently and there is no overall view of the interconnectedness of these factors and their mutual relations.

Huggins (2003) in the creation of "competitiveness index" emphasizes that the available data were comparable on local, regional and national level, and thus to a certain extent reflects interconnectivity between macroeconomic outputs and innovative business environment. Huggins in his article introduces index reflecting the model of three factors which contain the conceptual framework of competitiveness based on: (1) input, (2) outputs, and (3) results. Among the key inputs Huggins ranks “Density of firms” (the number of firms per capita.), the share of knowledge-based / functioning businesses and the overall economic participation. These variables contribute to the formation of output, which is particularly the productivity measured by GDP /capita.

Finally, the influence of the above measures (inputs and output) is manifested in the form of tangible results, which is the level of average wages (the amount of wages on full-time) and the unemployment rate. Huggins created a dynamic tool, Competitiveness Index, which should measure the competitiveness of regions. Created index which measures competitiveness author applied in UK, but using some modification of this index it can also be applied in other states. In the following table there is a summary of Huggins’s model of 3 factors which contain the concep-

tual framework of competitiveness. Unfortunately this model can be applied in Czech Republic only for regions NUTS 3 because Czech Statistical Office does not monitor chosen indicators of competitiveness in smaller regions like NUTS 4 (districts) or NUTS 5 (municipalities). And it is the municipality which is the object of interest of this thesis. For this reason another indicators of competitiveness of municipalities must be chosen.

Table 2 Indicators of economic competitiveness (Huggins, 2003)

<table>
<tr><th colspan="2">Economic inputs:</th><th colspan="2">Economic Outputs:</th><th colspan="2">Economic Results:</th></tr>
<tr><th>Indicator</th><th>CSO monitors on level</th><th>Indicator</th><th>CSO monitors on level</th><th>Indicator:</th><th>CSO monitors on level</th></tr>
<tr><td>Number of businesses per capita, respectively businesses by selected legal form, newly founded and extinct</td><td rowspan="7">NUTS III</td><td>Regional GDP per capita</td><td rowspan="7">NUTS III</td><td>Average wages</td><td rowspan="7">NUTS III</td></tr>
<tr><td>Innovative businesses</td><td>Regional GDP per employee</td><td>Net disposable income per capita</td></tr>
<tr><td>The share of knowledge-based companies (according to employment in the IT, telecommunications, financial and business services, media)</td><td rowspan="4">Export</td><td>Level of unemployment</td></tr>
<tr><td>The level of economic activity of the population</td><td rowspan="3">Net migration</td></tr>
<tr><td>Number of employees in R&D</td></tr>
<tr><td>Amount of expenses on R&D</td></tr>
</table>

3.5.2 Regional Competitiveness indicators by European Commission

Competitiveness index is the overall characteristic of the economic situation of some concrete region. This index is used by European Commission to measure competitiveness of countries from EU – regions NUTS 1. Its full name is "EU Regional Competitiveness Index" (EU regional competitiveness index, 2013). RCI was at first published by authors Jeffrey Sachs and John McArthur in the Report of Global Competitiveness 2001 - 2002. (Klvačová, 2007) For this reason there can be say that it is a relatively modern tool for the evaluation of competitiveness.

Assessment of the competitiveness based on RCI takes place on two levels. First level is above mention: category of NUTS 1 regions of EU. Based on the methodology, which European Commission has ordered, there were define, according to the scientific literature and on the basis of expert opinions, 11 key pillars of competitiveness (JRC European Commission: Annoni, Kozovska, 2010).

The second level of RCI compares smaller territorial units within specific countries in the Czech Republic NUTS2 or NUTS3. Calculation of the competitiveness index among local units of the Czech Republic takes place using a methodology developed by the Ministry for Regional development on the basis of a document issued by the European Commission. Czech Ministry for regional development used only 8 from 11 pillars for their evaluation of competitiveness of Czech regions (Ministerstvo pro místní rozvoj, Strategie regionálního rozvoje ČR 2014-20, 2013).

As stated above - the methodology elaborated by the European Commission represents the first level: assessing the competitiveness index among the most extensive and most different territorial units - states within the European Union. Figure number1 indicated general structure of RCI.

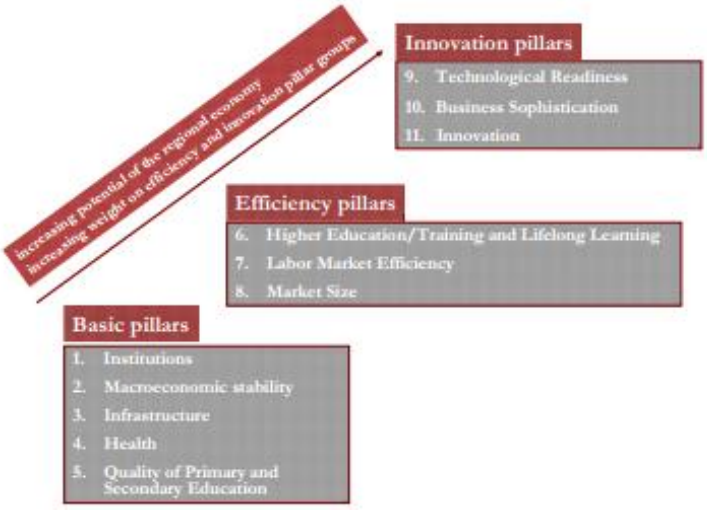


Figure 3 RCI (JRC European Commission: Annoni, Kozovska, 2010)

3.5.3 Competitiveness of Czech regions

RCI was also the tool used by Czech Ministry for Regional Development when they compared regions smaller than NUTS 1 (regions and municipalities with extended powers) in term of their competitiveness of. This analysis is an important part of Strategy of regional development of Czech Republic for the time period 2014 – 2020. In this analysis regions and municipalities with extended powers (MEP) in the Czech Republic were evaluated and sorted by competitiveness. Result can be seen in the picture bellow and will be used for the regression analysis of the competitiveness in empirical part of the thesis.

If speaking about methodology and the degree of objectivity, despite efforts to observe mutual data compatibility, the evaluation of MEP within one region is probably less objective than the evaluation used of competitiveness among Czech regions. But still it illustrates well the differences of MEP among the Czech Republic and can be used for decision making and preparation of strategic documents for the purpose of strategic management development (Ministerstvo pro místní rozvoj, Strategie regionálního rozvoje ČR 2014-20, 2013).

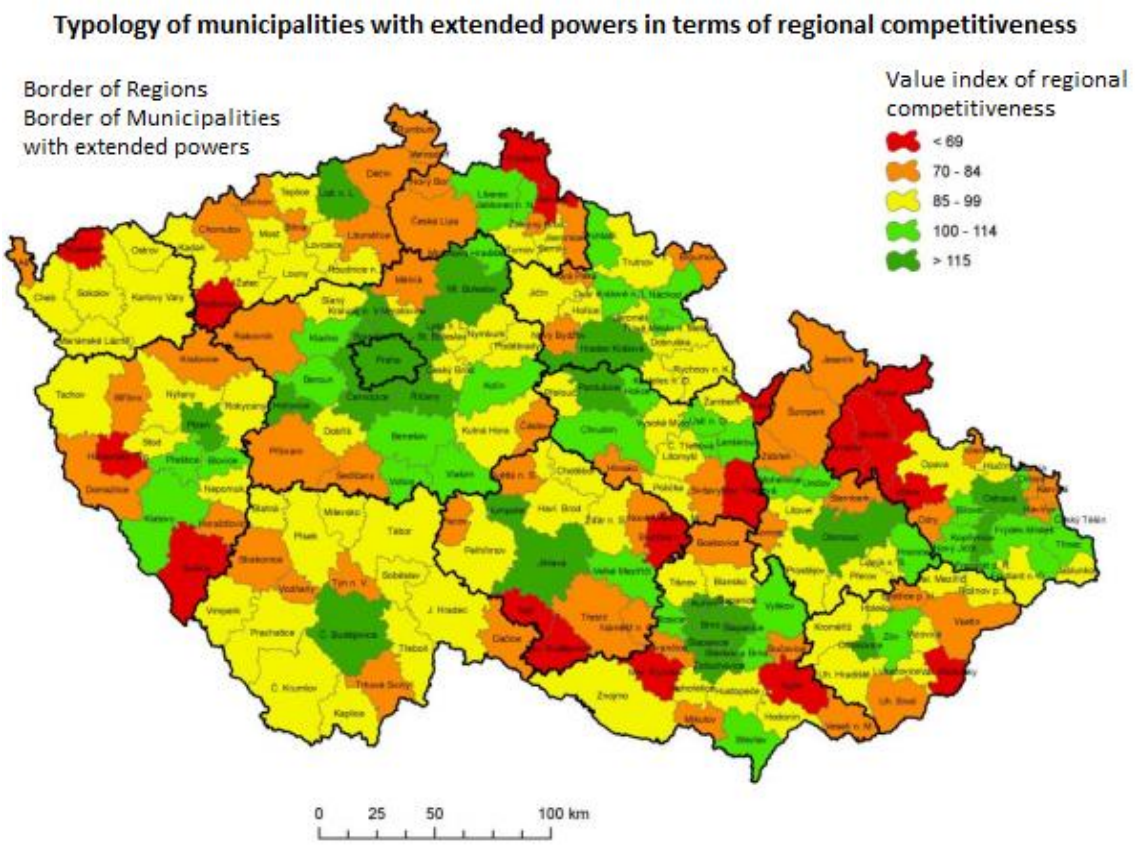


Figure 4 Typology of municipalities with extended powers according to their regional competitiveness (Ministerstvo pro místní rozvoj, Strategie regionálního rozvoje ČR 2014-20, 2013)

4 Methodology

4.1 Qualitative research

In the empirical part of the thesis qualitative research is carried out. Using-half-structured interviews with seven leaders of municipalities (mayors and representatives of municipalities) research dealing with the issue: factors of regional competitiveness from the local point of view is conducted. The focus is mainly on experiences, opinions and attitudes of respondents on this issue. The results are compared and suggested factors of competitiveness of municipalities are subsequently used for regression analysis of the competitiveness of municipalities.

Research is attended by six representatives of three municipalities from South Moravian Region and one representative of municipality from Karlovarský Region. Municipalities from South Moravian Region are small or medium size municipalities with number of inhabitants from 700 to 2000. Municipality from Karlovarský Region is bigger with more than 13 000 inhabitants.

Research was carried out during March and April 2015 in form of personal one to one interview with one exception, leader of municipality from Karlovarský Region, who was answered online on Skype.

4.1.1 Guidelines

Processing of this research work is governed by the findings of qualitative research processed by Hendl (2012). Qualitative research is the antithesis of quantitative research. His goal is not to capture the phenomenon under statistical viewpoint. Qualitative research attempts to analyse the meaning and understanding of the deeper connection of the study phenomena. For this reason, it is named by some methodologists as an imperfect type of research which importance can be found rather in complementation of quantitative research. Nevertheless, a qualitative research has earned a place as an independent research method and because it is used to identify the indicators of competitiveness of municipalities from the point of view of their leaders. These identified factors of competitiveness are further used in the regression analysis where is tested its significance and influence on regional competitiveness of MEP which was defined by Ministry for RD.

Qualitative research is characterized by intense and prolonged contact with the ground, groups or individuals. Solved problem has usually empirical nature, it is not a rare phenomenon. Researcher seeks an integrated view of the phenomenon from multiple viewpoints. The most important tool of the survey is researcher himself. When data collection he/she uses notes, video and audio on-familiar, photographs, diaries, official documents, etc. The main task is to understand phenomenon, its explanation and outline context. In conclusion, the collected data are analysed and interpreted.

Qualitative research is extremely flexible type of research and therefore it is hardly reproducible. Research works more often with sample selection. In the research process there are used description methods and extrapolation.

4.1.2 The ethical dimension of research and data collection

Ethical dimension plays an important role in the research. There are set the same conditions for all respondents during data collection. The primary rule is guaranteeing the anonymity of respondents. This approach should provide to respondents feeling of safety (no misuse of their answers against them) and guarantee sincerity and truthfulness of their answers. The anonymity of the respondents suggests Hendl (2012) and it was also demanded by several respondents who were afraid that publication of their opinions could someday be used against them and harms their political career or reputation. For this reason there is not presented list of names of the respondents and neither list of names of the municipalities where they act as mayors or representatives. Moreover this information is not important for this research. The respondents gave their consent to the processing of information provided when their demands on anonymity are fulfilled. Research participants were involved in a project of their own free will, and had the option to refuse further participation in research.

To ensure data collection qualitative research is used as it was already mentioned above. Methodologically it is a method of semi-structured interview. For all realized interviews there are defined the same areas of questions, which are addressed during the interview. If the respondent does not spontaneously express his or her opinion on the topic, open-ended questions are used. Questions related to own experiences and opinions of the respondents are, if possible, conceived broadly enough to not offer predefined answers, and allow to the respondent express his opinion on the topic from his or her perspective. Another important criterion is the preoccupation of the interview, which emphasized the obligation of the researcher to abstract from her opinions and suggestions.

4.2 Regression analysis of the secondary data

Afterward in the next part of the thesis regression analysis of secondary data from the official resources (Czech Statistical Office and Ministry for Regional Development of the Czech Republic) is provided. Factors of the regional competitiveness and environmental sustainability of municipalities which significantly effects regional competitiveness are identified. There is defined also their influence on competitiveness of municipalities with extended powers.

In 2013 Ministry for Regional Development publicized “Regional development strategy 2014-2020” where was presented official comparison of competitiveness of Czech regions smaller than NUTS2 (competitiveness of regions and municipalities with extended powers). Every municipality with extended power was evaluated in term of its competitiveness and obtained a point score (the more points, the higher level of competitiveness). This comparison will be important input for

the regression analysis and it will represent competitiveness level of chosen municipalities with extended powers (dependent variable Y in regression analysis). For the analyses there are used cross sectional data about all municipalities with extended powers from South Moravian, Olomouc and Zlín regions. The list of data is connected in annexes

Regression analysis is a statistical method, which goal is approaching to the so-called causal context. Causality means dependence existence of a one phenomenon on the occurrence of other phenomenon – in this case dependence existence of competitiveness of municipalities on its factors suggested by leaders of municipalities during interviews. More over regression analysis describes oscillation of one variable (dependent – competitiveness - Y) as a function of one or more independent variables (explanatory, regressors – factors of competitiveness - X) in a single regression model function. Regression analysis is capable of quantifying dependencies between economic variables and therefore, it is one of the most used statistical methods. Relationship between variables Y (dependent) and X (independent) can be described by general regression model:

$$Y = f(X) + \varepsilon$$

$$\text{Competitiveness} = f(\text{suggested factors of competitiveness}) + \varepsilon$$

Because there are suggested several factors of competitiveness of municipalities, linear regression model, which has the following form, is used:

$$Y = \beta_0 + \beta_1 * X_1 + \beta_2 * X_2 + \ldots + \beta_K * X_K + \varepsilon,$$

where $\beta 0$ is a level constant, $\beta 1$, $\beta 2$, ..., β_K are the regression parameters and $+ \varepsilon$ is stochastic term. **Stochastic residual (error) term** ε is variable representing a wide array of factors influencing the dependent variable Y, which are not explained by the explanatory variables X included in the model. (Wooldridge, 2009)

Method of ordinary least squares (OLS) is the most frequently used procedure to estimate numerical values of regression coefficients from a linear model and it is also used in this thesis. It is applicable to regression models, which are linear in parameters or can be made linear by some suitable transformation, such as logarithmic, reciprocal, etc. OLS estimates the coefficients of regression models linear in parameters, where the dependent variable Y is modelled as an additive function of the products between the β coefficients and explanatory variables X, the regressors or their function forms. (Hušek, 2007)

However, performing a regression does not automatically give a reliable relationship between variables. **Classical assumptions** of well specified model must be fulfilled to obtain reliable relationship between competitiveness and its factors:

I. Regression model is linear in parameters; it is correctly specified and it has an additive error term.
II. Expected value of the error term is zero.
III. All explanatory variables are uncorrelated with the error term.
IV. Error terms are uncorrelated = No serial correlation.
V. Error term has constant variance = No heteroskedasticity.

VI. No explanatory variable is a perfect linear combination of other explanatory variable(s) = No perfect multicollinearity. (Wooldridge, 2009)

For testing classical assumptions, **statistical hypothesis,** which is an assumption about the parameters, is used. Hypotheses are formulated in such a way that their interpretation after validation allows decision making with a predetermined risk dispersion consisting in unauthorized rejection of true assumption. For their verification statistical tests are used. Tests of statistical hypotheses are decision-making procedures, which, on the basis of the results obtained from the random selection, objectively determines decision whether the hypothesis should be rejected or not. The recommended procedure for testing statistical of hypotheses is:

- formulation of the problem,
- determination of H_0 (null hypothesis) and H_1 (alternative hypothesis),
- choice of significance level α (probability of incorrect rejection of H_0, for this thesis significance level $\alpha = 0{,}05$ is used),
- obtaining the sample,
- calculation of test statistics,
- decision to reject /not reject null hypothesis based on the critical field,
- interpretation of results (Budíková et al., 2010)

To find out the level of variability which was explained through the model, **the coefficient of determination** is used in the thesis. It is based on the decomposition of the total sum of squares (TSS) on regression (ESS) and residual (RSS) the sums of squares. It measures the variance of empirical observations of the dependent variable around the regression model. The smaller the variance, the more complete is explanation of the changes of the dependent variable due to changes in the independent variables. The coefficient of determination R^2 takes values in the interval from 0 to 1. The closer is coefficient to 1, the more variability is explained, and vice versa. But the problem with unadjusted R^2 coefficient is that it may increase in situations, when nonsense explanatory variable(s) are added to the model. For this reason **adjusted R^2 coefficient of determination** is used, which increases only when a statistically significant regressor is added to the model. The higher R^2 adj is the better.

$$R^2 = RSS/\ TSS = 1-(ESS/TSS)$$

Another indicator of good model described in the thesis is **information criteria**. There are Akaike information criteria (AIC), Schwarz´s (Bayesian) information criterion (BIC) and Hannan-Quinn information criterion (HQC). The criteria are derived from transformed residual variance of the model corrected or sample size (n) and model complexity. Optimum regression model, in each criterion, should produce minimum value of that criterion.

For testing significance of a chosen variable (factor of competitiveness), **t-test** is utilized. Hypothesis for a t-test are: H_0: coefficient is not significant, H_1: coefficient is significant. H_0 is rejected when p-value of the regressor is lower than level α or when a t-ratio in its absolute value is greater than approximately 2. **P-value** is

used to evaluate any statistical test, which implies known distribution of the test statistics. It is probability of observing more extreme value of the test statistics than that, which was received from the data. (Gujarati, 2004)

Though **F-test** there are tested the significance of one or more regression parameters (factors of competitiveness in case of this thesis) simultaneously, and evidence of supporting the model as a whole. Test is based on the decomposition of the total sum of squares where the total sum of squares equal to variability explained by the regression model and variability unexplained by the model, the residual error sum of squares:

$$TSS = RSS + ESS$$

The output of this test is Anova table. Hypothesis of F-test from ANOVA table are: model is not statistically significant and alternative H_1: model is statistically significant. H_0 is rejected on the level of importance α, if counted F statistics is higher than $F1 - \alpha (p - 1, n - p)$.

Ramsey's RESET test is test used in this thesis for detection of omitted variable in the model or incorrect specification. Their hypotheses are: H_0: model is correctly specified. H1: model is not correctly specified. Evaluation will be based on the p-value; null hypothesis is rejected when p-value is lower than α.

One of the assumptions of the classical linear regression model is linear relationship between variables. This assumption is tested in this thesis by **LM test**. The null hypothesis of this test assumes that the relationship is linear. However, if p-value of this test will be lower than the significance level α, the alternative hypothesis is applied. Test of nonlinearity has two forms. The first is using squares, second works with logarithms. Both variants of LM tests are conducted.

Homoskedasticity means that all error terms are generated by single distribution with a constant variance. **Heteroskedasticity** is a violation of this classical assumption which needs to be testes as well. All tests of variance homogeneity are based on statistical hypotheses. Null hypothesis tells that error term is homoskedastic. Opposite hypothesis H_1 says that error term is heteroskedastic. **White test** and **Breusch Pagan test** are general tests of heteroskedasticity which are also used in this thesis.

Classical assumption VI refers about **multicollinearity**. This assumption is examined as well in the regression model of competitiveness. By the definition explanatory variable is a perfect linear combination of other explanatory variable(s). There is no perfect (multi)collinearity. (Multi)collinearity can be detected by **Variance Inflation Factors, VIF(βj)**. Values > 10.0 may indicate a collinearity problem.

Normal distribution of stochastic error is classical assumption VII. There are many ways to verify normality of the error term. One of commonly used statistical test is **Chi-square test** of goodness of fit. The null hypothesis is always the same for all normality tests: H_0: the error term is normally distributed. H_1: the error term is not normally distributed. Chi-square test is used in the thesis together with another graphical method how to detect normality of residuals of the model of competitiveness: together with **Q-Q plot** (Gujarati, 2004).

5 Identification of factors of regional competitiveness

Factor of regional competitiveness are firstly suggested by leaders of municipalities and cities in qualitative research in semi-structured interview. These suggestions are subsequently used in regression analysis where will be identified only significant factors of competitiveness in term of its influence on regional competitiveness of municipalities. Also the analysis how the significant factors influence competitiveness of municipalities will be provided. Level of regional competitiveness of municipalities with extended power was determined by Ministry for Regional Development.

5.1 Qualitative research

5.1.1 Description of respondents

During the empirical part of this thesis (concretely during qualitative research) there were contacted 7 representatives of preselected municipalities, who agreed to participate in the research. There were 4 mayors of the municipalities and 3 representatives of municipalities. All respondents together represent municipalities with more than 17 000 inhabitants. There were leaders of municipalities from South Moravian and Karlovarský Regions. How individual municipalities are participating in the process of drawing money from EU's funds can be recognized from the table below.

Table 3 List of the municipalities with its involvement in process of drawing money from EU's funds (Data from Czech Statistical office and Česká televise, 2015)

Number of inhabitants of the municipality in hundreds	Number of finished and still ongoing projects	The total amount of money from EU's funds approved for ongoing projects in CZK	The total amount of money from EU's funds for completed projects in CZK
10	0	0	0
7	3	68 804 107	408 000
18	4	85 319 446	0
130	12	24 124 388	37 053 503

Respondent A – mayor of the small municipality with lot of new inhabitants. Municipality has great location – very close to the regional city. But this municipality has never in its history suggested any project plan which was financed through EU's funds despite the fact that it is still developing its infrastructure (sewerage, nursery school etc.). Mayor has more than 6 years of experience in leading of the municipality but no experiences with asking for a subsidy from EU's structural funds.

Respondent B – a representative of the same municipality as respondent A. He migrated here because of the new housing development. Despite the fact that he just started his career in public sector and doesn't have many experiences with it, he is very proactive person (he just launched new web sides of the municipality, supports sport events etc.). He is also interested in possibilities of financing public projects from Structural funds.

Respondent C – representative of the municipality same as respondent A. He has more than 5 years of experience in being representative. He is construction engineer responsible for new infrastructure in the municipality.

Respondent D – mayor of the municipality with more than 1800 of inhabitants. He has also more than 8 years of experience in being the mayor of this municipality and in his municipality some of the projects financed through EU's fund are currently ongoing. Mayor is actively promoting possibilities which offer financing from EU's funds.

Respondent E – representative of the same municipality as respondent D. Her main field of interest is culture which she also actively supports in municipality where she operates. She has no special involvement in possibilities of financing local projects from Structural Funds.

Respondent F – a mayor of the small municipality. He has experiences in project planning and drawing money from EU's funds and municipality where he is acting as mayors has already drawn more than 400 000 CZK for its projects from Structural Funds. He is strong and proactive person.

Respondent G – mayor of the municipality with extended power with more than 13 000 inhabitants. He has many years of experience in being the mayor and also in the way, how to draw money from EU's funds because this municipality has finished many projects which were co financed from EU and it has obtained more than 37 millions of CZK for its finished projects.

5.1.2 Structure of the interview

Interview was divided into four big blocks which are interrelated with competitiveness of municipality and the aim was to find out, which factors from these blocks considers respondent as significant for determination of competitiveness of municipality. Blocks were determined as:

- **Territorial cohesion** (living conditions of the population and socio – economic problems)
- **Regional competitiveness** (assessment of the economic conditions)
- **Environmental sustainability**
- **EU subsidies**

Within each block there were determined the topics which have been identified as significant elements in relation to the conducted research. The results (suggested factors of competitiveness of municipalities and cities) of the research in the next chapter are processed using paraphrasing respondents' answers which are finally

summarized in tables. The form of the interview is available as an appendix of this thesis.

5.1.3 Results

Block 1: Territorial cohesion

First part of the interview was devoted to the issue of living conditions and socio – economic problems. All respondents agreed that **population** is a key factor for competitiveness of the municipalities and cities and they proposed number of inhabitants of the municipality or city as a way of measurement, because the more inhabitants live in the municipality, the bigger budget is municipality operating with. Two respondents (B, G) noted that net migration to or out from the municipality can be also a determinant of number of population in the city or municipality and one respondent (G) suggested also a population growth as the second determinant.

Population issue is closely connected to the issue of **housing** which was mentioned by all the respondents as important factor of municipality's competitiveness. Two respondents came up with the number of finished flats in the municipality as possible way of measurement and it was emphasized especially by respondent C (construction engineer). Respondent B additionally admitted that new housing infrastructure was also the reason why he moved with his family to the municipality where he is now the councillor and he together with respondent F suggested also number of shops as factor of its competitiveness because this facility must be available for inhabitants in the municipality.

Another area which was discussed was **labour market**. Every respondent considered this area same important as the first two areas because low number of available jobs means not many businesses in the area and causes migration out of the municipalities. Every respondents listed unemployment rate as factor of competitiveness of municipality and respondent F suggested also number of jobseekers as another factor.

Education was also discussed within the interviews. This area was highly promoted by respondent E who proposed number of schools (elementary, high and grammar schools) together also with the number of libraries as one of the factor of the municipality's competitiveness. Few respondents came up with availability of universities and also number of school including nursery schools as possible factor of competitiveness same as respondent E.

Culture, sport and social services were other topics which were highly supported by respondents B, G and E. What is more respondent E was really captivated by this issue because she by her own is an organizer of culture events in the municipality where she acts as representative. She suggested number of culture, sport and social facilities as a possible indicator of competitiveness within this area. These indicators were partly suggested also by respondents B and G. Another 3 respondents (A, D and C) were not sure when it comes to the significance of

these areas and the last respondent (F) considered it as not very significant issue when it comes to municipality's competitiveness.

When it comes to **healthcare**, this area was promoted only by 3 respondents (E, G, B), another 3 (A, D, F) were not sure about its significance when it comes to competitiveness of municipality and the last one (C) considered it as not important factor. From those first 3 optimistic respondent 2 proposed number of doctors' offices or hospitals as determinant of healthcare.

All the respondents commented area **atmosphere** in the city as significant factor of its competitiveness. Respondent G suggested level of criminality as a possible method of measurement of this area.

Block 2: Regional competitiveness

In the second part of the interview research tried to find out which factors determine economic potential of the municipality and city. First area in this block was devoted to **infrastructure**. All respondents conceded that infrastructure has big influence on competitiveness of the municipality. 3 respondents (B, C, and F) proposed accessibility to region city as possible factor because time accessibility to region city is important for communing to work, school etc. One respondent (C) added also density and quality of the motorways as another possible determinant of infrastructure.

Area **business environment** followed the area infrastructure because presence of companies in the municipality or city does not mean only availability of jobs but also potential development of the area. This fact was admitted by 5 respondents (except E and D). Two respondents (C, G) therefore suggested number of companies as possible way of measurement.

When it comes to **tourism**, respondents did not mostly believe in great importance of this area in context of the competitiveness of municipality. Only respondents E and G were more optimistic about tourism and they together proposed number of tourist services and attractiveness of the surroundings as possible determinants of competitiveness within this area.

Area **efficiency of resources** was under a huge discussion. 3 respondents claimed (A, D, F) that quality of resources has influence on competitiveness of every business and municipality is also type of public enterprise with its own budget etc. For this reason respondent A listed a quality of HR as significant factors of competitiveness.

Previous area is closely connected to last area within block 2, **innovations and technologies**. Innovation and technologies is becoming highly promoted nowadays. Also our respondents accepted it within the interviews and respondent G suggested number of companies which operate in knowledge intensive sector as potential way of measurement.

Block 3: Environmental sustainability

Third block of questions was dedicated to environment and sustainability. In this case all respondents agreed that this area has a huge importance nowadays but

only 4 of them (A, B, D, E) said that it can have direct impact also on municipalities and cities. Two respondents (B and D) stated fresh air, level of pollution, clear water or saving energy for example in form of insulation of buildings and level of using renewable energies as potential method of measurement.

Block 4: Grants from EU

Final part of the interview was dedicated to the respondents' view on drawing money from EU's Structural funds for projects of the municipalities as a possible tool of increasing the competitiveness of municipalities or cities. They opinions differ according to their experiences with financing of their projects from EU's funds. The biggest experiences in this area had respondent G, then respondent F together with respondent D. On the other hand almost no experiences with this topic had respondent A, C and E. This first well experienced group of 3 people had quite optimistic opinion about grants from EU. They claimed that together with EU they could effort to finance a lot of public projects which could not be realized without money from EU. But on the other side they also admitted that financing from EU brings a lot of paperwork and not always is fully transparent. Two respondents (G and D) also stated that financing from EU's funds can be sometimes risky when the project plans are not well prepared or when the projects do not fulfil all the demanded conditions. In these cases it can happened that the municipality does not finally got the subsidy and has to finance their projects by its own which can ruin it.

The second group of leaders of municipalities and cities said that financing their projects from EU's funds can be beneficial but brings more cost in form of paperwork and project administration as was also mentioned by first group of respondents and therefore they were more sceptical about it. Respondent A stated also the risk of financing projects from EU funds same as respondents G and D. She also suggested that projects can be financed by alternative subsidies from region or state, which is much less risky for the municipality. She also admitted, that everyday tasks, which leaders of municipality have to fulfil are so time demanding, that they do not have enough time to focus on preparing project with the financial subsidy from EU funds. Only respondent B, new representative of same municipality as respondent A, municipality which has never financed any of its projects from EU's funds, noted, that it is a shame for the municipality, that it is not using these opportunities and he wants to change it.

Summary of the opinions of respondents can be seen in the table below. Within this block of interview there were proposed two ways of measurement of competitiveness. Two leaders of municipalities (G, F) suggested number of realized projects with the financial subsidy from EU as first possible measurement of competitiveness and respondent G proposed also amount of drawn money from EU's funds for local projects as second possible factor of local competitiveness.

Table 4 Respondents' opinions about financing projects from EU funds (author's research)

Respondent	Opinions about financing projects from EU Funds		Experiences with financing from EU's funds
	+ Positives	- Negatives	
A	Not many	Lot of paperwork, not transparent, risky, municipality can finally do not gain the subsidy and has to finance everything by itself, better use alternative subsidies, not enough time for project planning (to many everyday's tasks)	low
B	Municipality can afford to finance bigger projects, opportunity how to increase its competitiveness	Not many	low
C	New challenges for municipality, new projects	Paperwork, project administration, risky	low
D	New big projects for municipality, innovations, new technologies	Transparency, risky: municipality does not finally got the subsidy or its part	high
E	New projects	Risky	low
F	Innovations	Risky	high
G	New projects for municipality, innovations	Paper work, transparency, risky: municipality does not finally got the subsidy –it can ruin it	huge

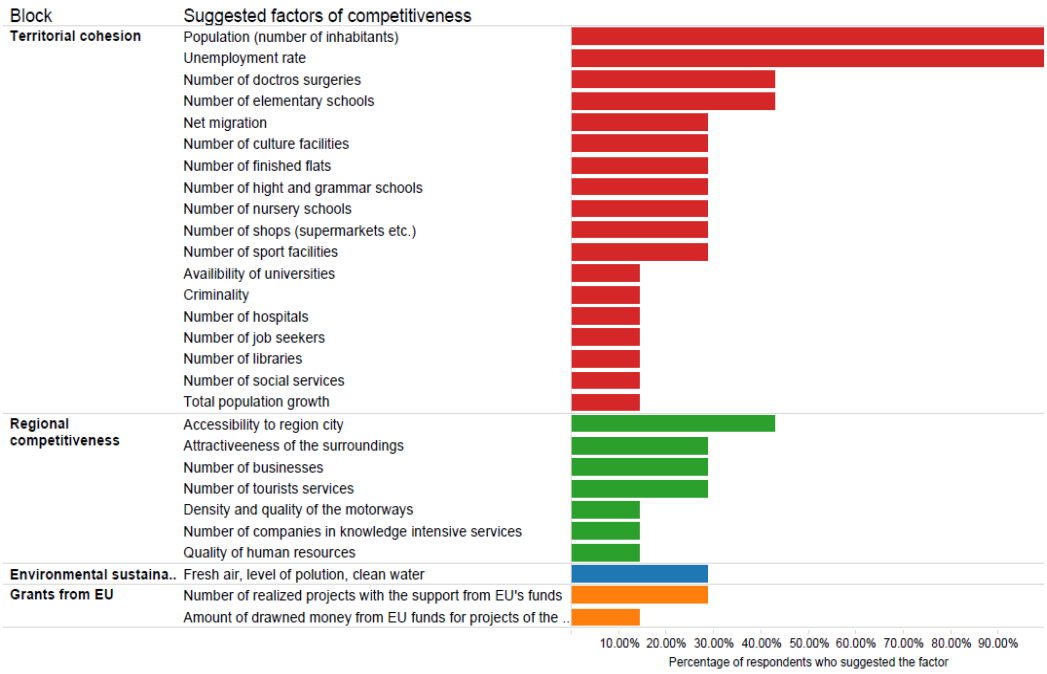


Figure 5 Suggested factors of competitiveness by leaders of municipalities plus share of respondents, who proposed the factor (author's research)

5.2 Regression analysis

Next step in determination of factors of competitiveness of municipalities is regression analysis. Thanks to this analysis there are determined only factors of regional competitiveness firstly suggested by leaders of municipalities through interviews which significantly affects regional competitiveness of MEP defined by Ministry of RD and there is also found out the relationship between competitiveness of MEP and its determinants.

Dependent variable in the analysis is the competitiveness of municipalities represents by index of regional competitiveness determined by Ministry for RD (see picture number 4 in chapter 3.5.3). Determinants of competitiveness were proposed through qualitative research conducted with the representatives of the municipalities. Unfortunately few competitiveness factors identified by leaders of municipalities cannot be found on the level of NUTS 5, because Czech Statistical Office, Ministry of Industry and Trade of the Czech Republic or others are collected them on the higher levels or not at all and for this reason they cannot be used in regression analysis. List of all variables used in analysis together with the expected influence on the dependent variable (competitiveness) can be seen in the table 5 below. Plus means positive relationship between competitiveness and its indicator (the higher value of indicator, the greater level of competitiveness) and conversely.

Table 5 Factors of competitiveness of municipalities - explanatory variable (author's research)

Block	Area within the block	Factors of competitiveness	Expected sign
Territorial cohesion	Population	Population (number of inhabitants) in 2013	+
		Total population growth in % in 2013	+
		Net migration in % in 2013	+
	Housing	Number of finished flats in 2013	+
	Labour market	Unemployment rate in % in 2013	-
		Number of job seekers in 2013	-
	Education	Number of nursery schools	+
		Number of elementary schools	+
		High and grammar schools	+
		Number of libraries in 2006	+
	Culture and sport	Number of culture facilities in 2006	+
		Number of sport facilities in 2006	+
	Social services	Number of social services in 2011	+
	Healthcare	Number of doctors' surgeries in 2013	+
		Number of hospitals in 2013	+

Block	Area within the block	Factors of competitiveness	Expected sign
Regional competitiveness	Infrastructure	Accessibility to region city in minutes by car	-
	Business environment	Number of small businesses (less than 50 employees) in 2013	+
		Number of medium businesses (less than 250 employees) in 2013	+
		Number of large businesses (more than 249 employees) in 2013	+
	Tourism	Number of businesses in the area accommodation and food services in 2015	+
	Innovation and technology	Number of companies in knowledge intensive services in 2015[1]	+
Grants from EU	Subsidies	Amount of drawn money (CZK) from EU funds for projects of the municipality till 2013	+
	Projects	Number of realized projects with the support from EU's funds till 2013	+

In the beginning an empirical analysis of dependent variable (competitiveness of municipalities) and chosen independent variables is conducted. The first step is to model competitiveness of municipalities as a function of 23 regressors using OLS method in Gretl software. More specifically backward elimination approach (starting with a full model and testing significance of the variables) is applied. Insignificant variables are removed from the model one by one. Firstly variables with a highest p-value (with no*) are removed.

Table 6 shows results from OLS method representing a full model where were used all 23 regressors. From the table can be seen, than not all variables are significant and some of them do not have an expected sign. It is recognized using a statistical test t-test (p-value must be lower than 0,05). For this reason insignificant variables (with no higher p-value than 0,05 and no *) are removed one by one from the model. In the next table there can see how the model is changing during dropping non-significant variables.

[1] The definition of knowledge-intensive services was created by the OECD and is based on the NACE classification. Among knowledge intensive services belong: High-tech services, market services, financial services and other knowledge-intensive services. For the analyses there were used data from CSO representing number of business dealing with ICT, banking and instance, real estate activities, professional, scientific and technical activities, administrative and support service activities, public administration and defence, compulsory social security, education, health and social care, arts, entertainment and recreation activities.

Table 6 Model 1: OLS, using all observations 1-47, Dependent variable: Competitiveness (author's analyses based on the output from Gretl software)

	coefficient	Std. error	t-ratio	p-value	
const	111,329	14,2803	7,796	<0,0001	***
Accessibility to region city	−0,23796	0,157066	−1,5150	0,1434	
Number of finished flats	0,165697	0,0993261	1,7682	0,0858	*
Number of doctors surgeries	0,58717	0,397247	1,4781	0,1529	
Number of hospitals	−5,86272	4,99924	−1,1727	0,2529	
Number of social services	−0,789745	0,670556	−1,1777	0,2509	
Number of nursery schools	0,584329	1,1164	0,5234	0,6057	
Number of elementary schools	−0,614999	1,79674	−0,3423	0,7352	
Number of high and grammar schools	−0,330753	1,05716	−0,3129	0,7572	
Number of libraries	1,01887	0,764897	1,332	0,1959	
Number of culture facilities	1,28041	0,611418	2,0942	0,0475	**
Number of sport facilities	0,185276	0,189993	0,9752	0,3396	
Unemployment rate	−1,91264	1,21223	−1,5778	0,1283	
Number of job seekers	0,0002803	0,0047963	0,0584	0,9539	
Number of inhabitants	0,0006787	0,0005979	1,1352	0,268	
Total population growth	3,13176	1,68372	1,86	0,0757	*
Net migration	−2,99556	2,20311	−1,3597	0,1871	
Small businesses	0,0002925	0,0009814	0,298	0,7684	
Medium businesses	0,265896	0,200599	1,3255	0,198	
Large businesses	1,65191	0,763458	2,1637	0,0411	**
Companies in knowledge intensive sector	0,0123398	0,0051642	2,3895	0,0255	**
Amount of subsidies	−1,55146e-07	1,27E-07	−1,2254	0,2328	
Number of finished projects	0,848906	0,580379	1,4627	0,1571	
Number of tourists services	0,0770288	0,036052	2,1366	0,0435	**
Mean dependent var	92,31915		S.D. dependent var	16,69432	
Sum squared residuals	2905,017		S. E. of regression	11,23855	
R-squared	0,773403		Adjusted R-squared	0,546807	
F(23, 23)	3,413129		P-value(F)	0,002339	
Log - likelihood	−163,6052		Akaik criterion	375,2104	
Schwarz criterion	419,614		Hannan-Quinn	391,9198	

From the table 7, which show how the model is changing by dropping insignificant variables, it is clear that the last model with all significant variables is the best one. It has the highest value of R^2 adj and lowest information criteria which are other indicator of a good model. Optimum regression model, in each criterion, should produce minimum value of that criterion.

Table 7 Comparison of the models (author's analyses based on the output from Gretl software)

Model	R^2 adj	AIC	BIC	HQC
Full model	0,546807	375,2104	419,614	391,9198
Second model without number of job seekers	0,565625	373,2174	415,7708	389,2305
Third model without small businesses	0,581442	371,3927	412,0959	386,7096
Fourth model without high and grammar schools	0,596213	369,5475	408,4006	384,1682
Fifth model without elementary schools	0,608748	367,8391	404,8420	381,7636
Sixth model without nursery schools	0,619658	366,2192	401,3720	379,4475
Seventh model without sport facilities	0,620518	365,7621	399,0647	378,2941
Eighth model without social services	0,624556	364,8526	396,3051	376,6884
Ninth model without libraries	0,613684	365,7355	395,3378	376,8750
Tenth model without amount of subsidies	0,608209	365,8891	393,6413	376,3325
Eleventh model without number of hospitals	0,610013	365,1184	391,0205	374,8655
Twelfth model without net migration	**0,617179**	**364,8618**	**388,9137**	**373,9127**

5.2.1 Relationship between variables: significant factors of competitiveness

Table 8 represents the final model of competitiveness which is a function of remaining 12 regressors which are significant factors of regional competitiveness expressed by RCI. In other words by dropping all non-significant variables, competitiveness of municipalities with extended powers defined by Ministry of Regional Development is function of these variables:

Competitiveness = 119, 07
- 0, 2784 Accessibility to region city
+ 0, 1095 Number of completed flats
+ 0, 6845 Number of doctors surgeries
+ 1, 3349 Number of culture facilities
- 2, 3523 Unemployment rate
+ 0, 0009 Number of inhabitants
+ 1, 1068 Total population growth
+ 0, 3501 Number of medium businesses
+ 1, 1385 Number of large businesses
+ 0, 0138 Number of companies in knowledge intensive sectors
+ 0, 6137 Number of realized projects with the subsidy from EU Funds
+ 0, 0807 Number of tourist services

Table 8 Final model of competitiveness, OLS method, using all observations 1-47 (author's analyses based on the output from Gretl software)

	coefficient	Std. error	t-ratio	p-value	
const	119,067	8,84139	13,47	3,46E-15	***
Accessibility to region city	-0,278378	0,116747	-2,384	0,0228	**
Number of completed flats	0,109514	0,075275	1,855	0,9549	*
Number of doctors surgeries	0,684543	0,201263	3,401	0,0017	***
Number of culture facilities	1,33492	0,43965	3,036	0,0046	***
Unemployment rate	-2,35232	0,765969	-3,071	0,0042	***
Number of inhabitants	0,0008772	0,000458	1,914	0,0641	*
Total population growth	1,10678	0,375174	2,95	0,0057	***
Number of medium businesses	0,35013	0,16444	2,129	0,0406	**
Number of large businesses	1,13849	0,550785	2,067	0,0464	**
Number of companies in knowledge intensive sector	0,013755	0,00369	3,728	0,0007	***
Number of finished projects	0,613725	0,359599	1,707	0,097	*
Number of tourists services	0,0807341	0,027802	2,904	0,0064	***
Mean dependent var	92,31915		S.D. dependent var	16,69432	
Sum squared residual	3722,294		S. E. of regression	10,46323	
R-squared	0,709654		Adjusted R-squared	0,617179	
F(23, 23)	6,925148		P-value(F)	3,95E-06	
Log - likelihood	–169,4309		Akaike criterion	364,8618	
Schwarz criterion	388,9137		Hannan-Quinn	373,9127	

From the formula can it be concluded, that competitiveness of MEP depends on 12 variables listed above. When the accessibility to region city increases by 1 minute, competitiveness level, or in other words value of RCI specified by Ministry for RD, decreases by 0.2784. If the number of completed flats in year increases by 1 flat, competitiveness level (RCI) increases by 0,1095. When some new doctor surgery is open, RCI growths by 0,6845. Positive effects on competitiveness have also culture facilities in the MEP. If there is set up for example new cinema in the MEP, regional competitiveness index rises by 1, 3349. As it was anticipated, the higher unemployment in the municipality, the lower is its competitiveness. More specifically if unemployment increases in the MEP by 1 percentile point, RCI decreases by 2, 3523.

Leaders of municipalities suggested that the more inhabitants live in the municipality and the higher is population growth, the higher level of the competitiveness of the municipality is. Regression analysis confirmed this prediction. If number of inhabitants of the MEP increases by 10 000 people, regional competitiveness index rises by 8, 79 and if total population growth increases by 1 percentile point regional competitiveness index rises by 1, 1068.

Mayors and representatives of municipalities who participated in the qualitative research also claimed that if there are a lot of businesses in the municipality

and nearby, it means many available jobs and therefore more inhabitants and higher competitiveness level of municipality. Regression analyses acknowledge also this claim. If new medium business with more than 49 and less than 250 employees appears in the MEP, its RCI growths by 0,3501 and moreover if large business which more than 249 employees is set up, RCI of MEP increases by 1,1385.

Innovations and technologies represented by number of businesses in knowledge intensive sector have also a positive impact on competitiveness of MEP. It was confirmed that if such a new business is founded in the area of MEP, its RCI growths by 0, 0138.

Tourism influences competitiveness of MEP in a positive way too. If there is new tourist service (for example hotel) founded in the municipality, its RCI growths by 0, 0807.

There was analyzed also a relationship between competitiveness of municipality and is involvement in process of drawing money from EU funds. Instead of the fact, that amount of money drawn from EU Structural funds was not significant factor of competitiveness in the analysis; the number of realized projects in the municipality which were co financed from Structural funds was confirmed as significant factor of competiveness. If new projects which is co financed from Structural funds is realized in the MEP, its RCI growths by 0, 6137.

5.2.2 Correct specification of the model

The estimations that were created through linear regression produced a linear relationship between the variables. However, performing a regression does not automatically give a reliable relationship between variables. Seven classical assumptions of well specified model must be fulfilled.

After dropping non-significant variables firstly the model must be tested on all classical assumptions. Firstly it will be test on correct specification. Because model is linear it can be tested by **Lagrange Multiplier (LM)** test of linearity.

Table 9 LM test (author's calculation based on Gretl outputs)

LM test: results	p-value
Polynomic form	0,146117
Logarithmic form	0,0777562

From the both results of LM tests it is obvious that function form of the model is OK and model is linear (both p-values are higher than 0, 05, Failure of H_0 rejection).

Another used test for detection of omitted variable in the model or incorrect specification of the model was **Ramsey's RESET test**. Test resulted with the p-value = 0,992. From p-value it is clear that null hypotheses failed to be rejected and model is correctly specified.

More ways to verify correct model specification are adjusted coefficient of determination (R^2_{adj}) and Information criteria. Results of those tests were presented in the table 8. 61, 71 % of variability was explained by regression model to the total variability which is sufficient result.

Model significance was tested also using **F–test and ANOVA table**. P-value of the test from the ANOVA table is 3,95e-006which is very small number. Null hypothesis is rejected and model is statistically significant. Classical assumption number 1 which says that regression model is linear in parameters, it is correctly specified and it has an additive error term was confirmed.

Table 10 ANOVA table (author's calculation based on Gretl outputs)

	Sum of squares	df	Mean square	F
Regression	9097,92	12	758,16	6,92515
Residual	3722,29	34	109,479	
Total	12820,2	46	278,7	

Another classical assumption is correlation. Existence of serial correlation implies that the error term from one time period depends on error term from other time periods. But because data are cross sectional, correlation cannot appear in the model.

By the classical assumption number V error term has constant variance which is requirement for homoskedasticity of the error term. Homoskedasticity was tested using **White test** and **Breusch-Pagan test**. Result of these tests can be seen bellow.

Table 11 White and Breusch Pagan tests (author's calculation based on Gretl outputs)

Tests for homoskedasticity	p-value
White form	0,796613
Breusch - Pagan	0,774606

P-values is in both tests greater than alpha (0, 05), Null hypothesis is not rejected, there is no heteroskedasticity. Errors are homoskedastic. Assumption number V is fulfilled.

Classical assumption VI refers about multicollinearity which can be detected by **Variance Inflation Factors, VIF (βj)**. Results of the test are presented in the next table. From our output is clear that several regressors are higher than 10. There is multicollinearity in the model. Classical assumption VI is violated. How can to solve this problem? The best solution in this case is simple. Do nothing. Because when analysis constructed a correctly specified model with statistically significant and interpretable estimates of the coefficients, it is the most suitable approach.

Table 12 Collinearity: VIF (author's calculation based on Gretl outputs)

Regressor	VIF
Accessibility to region city	1,88
Flats	70,94
Doctors surgeries	35,01
Culture facilities	57,5
Unemployment rate	1,39
Number of inhabitants	270,52
Total population growth	1,64
Medium businesses	81,76
Large businesses	43,28
Companies in knowledge intensive sector	448,7
Projects	13,96
Tourists services	199,35

Normal distribution of stochastic error is classical assumption VII. There are many ways to verify normality of the error term. One of commonly used statistical test is Chi-square test of goodness of fit. Result of this test confirmed that error is normally distributed because p-value (0, 87311) was higher than 0, 05, failure of H0 rejection. Picture number 6 bellow shows also how the stochastic error is distributed.

Another graphical method how to detect normality of residuals is **Q-Q plot**. The result from this method can be seen in the picture number 7. When the red points are situated on the blue line or near to the blue line, residuals are normally distributed. Classical assumption number seven was fulfilled as well.

From all the test conducted there can be say, that model of competitiveness and its 12 regressors, factors of competitiveness, fulfils all the classical assumptions and therefore there was reached reliable relationship between variables.

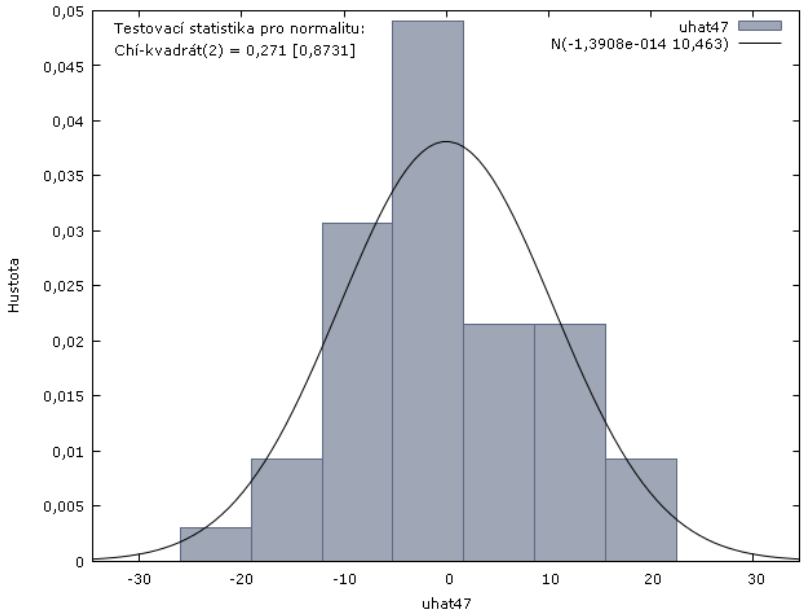


Figure 6 Normal distribution of the stochastic error (author's work based on Gretl outputs)

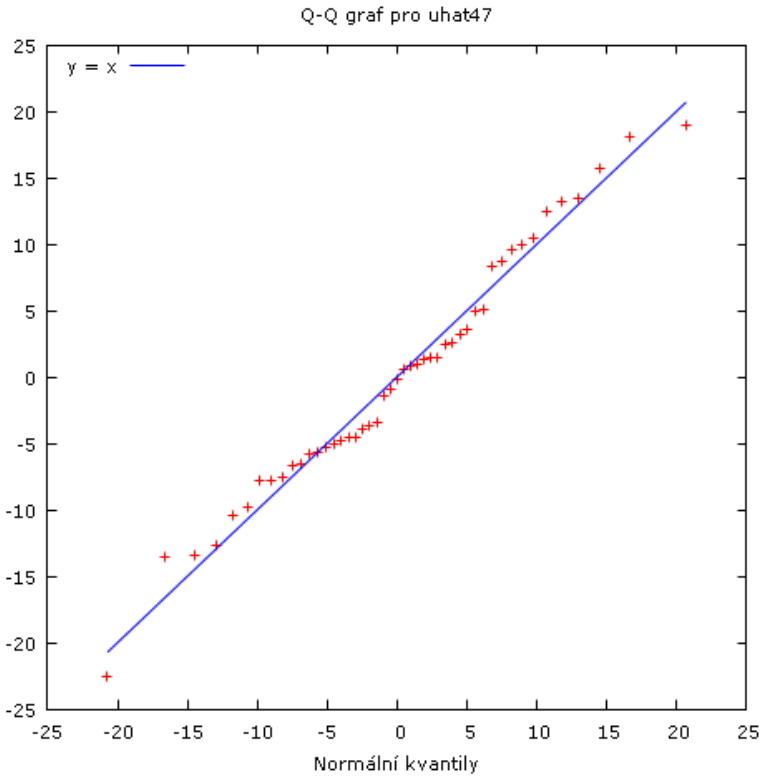


Figure 7 QQ plot of normal distribution (author's work based on Gretl outputs)

6 Possibilities of financing projects from EU funds

In the previous chapter there was find out that one of the factors, which positively influences competitiveness of municipalities expressed by RCI, is number of projects realized in municipality with the financial support from EU Structural Funds. In this chapter there will be prepared and example of the project plan for municipality, specific type of public enterprise, accounting and tax unit with its own budget, through which can municipality apply for subsidy from Structural funds within the Operation program Environment. Idea to create such a project plan together with a simple instructions for applicant - how to request for subsidy from EU funds, was chosen because new programming period 2014 – 2020 started only last year and it brought many news for applicants. What is more only since 30th April 2015 Operation programme Environment, which is the relevant OP for this project, was approved by European Commission (Ministerstvo místního rozvoje, 2014). There are many news in case of application for a subsidy, new specific areas of support, new project are supported etc. and till now there do not exists many manuals for applicants where to draw information and advices.

Consequently in the end of this chapter there will be prepared recommendations for Czech municipalities how to improve their competitiveness through financing from EU funds.

6.1 Project plan for selected enterprise

They say that good ideas come quickly, but the path from idea to its realization is complicated and long. Nowadays, when constantly talking about the "billions" that will flow into our regions from EU funds, many leaders think about getting the money from the EU for their projects. But only coming up with this idea to provider of subsidies is not enough. Lot of preparation stands behind the implementation of the project and the principle is that a good project is project whose implementation would take place even without the subsidy requested, and possibly obtaining grants may only accelerate its implementation. (Centrum pro regionální rozvoj ČR, 2011)

This advice applies also to a municipality for which there will be prepared above mentioned general project plan. Idea is to use money from Structural funds for a subsidy under the Operation program Environment for **Project "Public building insulation".** Public building is represented in this project by municipal office. Idea of this project is to insulate envelope of the building, floors and ceilings and replace doors and windows of the municipal office.

Very similar project plan can be used for municipality planning insulation for example of its cultural centre, nursery school etc. It can be also applied by municipality, which plans to implement measures with proven impact on the energy performance of the public building or improve indoor environmental quality of the

public building etc. Suitable candidate for such a subsidy, which can also use this project plan, is also public benefit corporation, university, public research institutions etc. (Region soudržnosti Jihozápad, 2014).

This project was chosen taking into account suggestions of leaders of municipalities, who proposed saving energies for example in form of insulation of buildings as possible factor of regional competitiveness.

6.1.1 Formulation of project plan "Public building insulation"

First step is to formulate project plan, its objectives, and way of financing and think about sustainability of the project: can it work 3 – 5 years and still generates outputs?

1. **Main goal of the project:** Reduce energy consumption for heating
2. **Partial goals:** Reduce the negative environmental impact of heating, reducing costs for fuel, and contribute to the efficient use of energy resources and help to the overall improvement of the environment.
3. **Finances:** Cost of the projects are very individual and depends on a specific type of project (size of the building, used material, technologies etc.) Because this project is only an example how can municipality ask for subsidy from EU Funds for insulation of public building, for illustration there will be used amount 1 500 000 CZK as total costs of the project which is an average cost of the similar projects realized with the subsidy from EU Funds and published by Ministry of Environment on its website "Operation programme Environment", 2014.

EU funds only supplements costs of the project. The rate of co-financing projects by EU where the applicant is municipality can be **up to 85 %**. (Centrum pro regionální rozvoj ČR, 2011) For this reason this project can be **co-financed by EU** maximally up to 1 275 000 CZK. But total amount of support from EU funds for similar projects published by Ministry of Environment on its website "Operation programme Environment", 2014 was around 60 % of total projects' costs.

4. **Sustainability**: Because building insulation ensures decrease of energy consumption for whole useful life of the building, it reduces the negative environmental impact of heating, costs for fuel, and contributes to the efficient use of energy resources and help to the overall improvement of the environment, it is clear that project will generate outputs much longer than 5 year. What is more this reconstruction also prolongs useful life of the building.

Project "fiche" is a very useful tool for organizing thoughts of the applicant. It describes the basic ideas of the project, proposed method of financing, and also outputs, results and impacts of the project. In relation to the grant application it is only supportive, not mandatory, document. The written material will make processing of the application, including attachments, more easy. Project fiche for this project is described in the following table. Its structure is recommended structure of project fiche by Centre for RD of Czech Rep, 2011).

Table 13 Project fiche (author's design)

1. Reference identifying future investor/applicant for the grant (hereinafter entity):	
1.1. Name of the entity	Name of the municipality
1.2. Address of the applicant	Name of the municipality
1.2. Identification Number (IČ in Czech)	IN of the municipality
1.3. Value added tax registration number VAT Reg. No (DIČ in Czech)	VAT Reg. No f the municipality
1.4. Telephone number	Telephone number of the municipality
1.5. Fax	Fax of the municipality
1.6. Email address	Email address of the municipality
1.7. Web page	Municipality's web page if it is available
1.8. Statutory representative	Mayor of the municipality together with the Council and representatives of the municipality
2. Technical qualification of an entity and its partners (preparatory and implementation team)	
2.1. Project partners and implementation team	In case of our municipality it can be other municipality, which has more experiences with this type of project or municipality, which realise the same project at the same time and they together creates voluntary association of municipalities. Possible partner will no co-finance the project; only provides the knowledge in this area.
2.2. Experience of an entity (of its partners or preparatory and implementation team) with similar projects	One or several similar projects already implemented by municipality. It should be a project where entity can show that it has been able to manage projects of a similar type (in terms of the project's subject) or of a similar financial amount in the past.
3. The specifications of the project plan	
3.1. Name of the project	Insulation of the public building: municipal office
3.2. The place of execution	Name of the municipality and district
3.3. Project's objectives	1. Reduce energy consumption for heating
	2. Reduce the negative environmental impact of heating
	3. Reduce costs for fuel
	4. Contribute to the efficient use of energy resources
	5. Help to the overall improvement of the environment
3.4. Detail description of the project	Aim of this project is to reduce energy consumption for heating of the public building: municipal office and achieve the minimal recommended value of the average heat transfer coefficient through the building envelope. By reducing energy consumption there will be ensured reducing costs for fuel and negative environmental impact of the heating etc. Municipal building is now not properly insulated, old doors and windows easily permeable heat.
3.5. Specifications of the main project activities	Insulation of the building envelope will be realized using tiles from polystyrene plates and old windows and doors will be replaced by new plastic ones. Floors and ceilings will be insulated too.
3.6. Compliance with dev. project documents	A brief excerpt from the strategic documents of the municipality: Environmental sustainability, reducing consumption of energy, etc.

4. Time schedule of the project	
4.1 Estimation of time required for the individual phases of the project	**Preparatory phase: 2 months** *Activities:* • Identification of potential targets of support: the inadequate state of the municipal office building. • Identification of priority axes and areas of support from EU structural funds. • Implementation of the project feasibility study with positive results • Positive results of the analysis of the impact of the project on the environment. **Implementation phase: 6 months** *Activities:* • Project launching • An application for a building permit • Entering a tender for the construction company, which will implement reconstruction • Assignment of project to the construction firm • Insulation of the municipal office • Continuous monitoring of construction works • Acceptance of construction work • Completion **Operation phase: 5 years** (during with must project prove to be sustainable) *Activities:* • Continuous monitoring of the technical conditions of the municipal office • Monitoring the amount of energy consumption for heating
5. Estimation of project costs	
5.1 Estimated costs associated with the implementation of the project (pre-budget)	1500 000 CZK
6. Way of project financing	
6.1. The list of existing subsidy programs / titles corresponding to the orientation of the future project	OP Environment, Priority 5: Energy savings, Specific objective number 1 is to "Reduce the energy demands of public buildings and increase the use of renewable energy source"
6.2 Funding of the project implementation by the applicant	
a) Own funds	Budget of the municipality: 225 000 CZK (15 %)
b) Commercial loan	0
c) Other:	EU funds: 1 275 000 CZK (85 %)
7. Expected outputs, results and impacts of the project	
7.1 Specification and quantification of the expected outcomes of the project	Insulation of public building: municipal office
7.2. Specification and quantification of the expected results of the project	Reducing energy consumption for heating of the building + achieving the minimal recommended value of the average heat transfer coefficient through the building envelope
7.3 Specification and quantification of the expected impacts of the project	Reduce costs for fuel and negative environmental impact of the heating. Contribution to the efficient use of energy resources. Helping to the overall improvement of the environment
8. The risks of the project and project sustainability	
8.1. External	Change of the political situation, natural disaster, change in municipality leadership, sudden changes in projects funding by EU
8.2. Internal	Selection of a suitable contractor, project manager selection, on time and accurate submission of applications for subsidies

6.1.2 Finding the relevant operational program and specific areas of support for project plan

New programming period 2014-2020 brought much news and only since 30th April 2015 Operation programme Environment, which is the relevant OP for this project, was approved by European Commission. Unfortunately there are now no available Calls to react on and for this reason applicant has to wait for actual Call to submit his application for subsidy for the project via information system, which is described in the next chapter.

Control Authority for programme Environment is Ministry of Environment. The main objective of the program is to protect and ensure the quality of the living environment of the Czech population and promoting efficient use of resources. Under the program, projects may focus on eliminating the negative impacts of human activities on the environment and the overall mitigation of adverse impacts of climate change. (Ministerstvo místního rozvoje, 2014)

After finding proper OP, applicant (our municipality) has to choose relevant area of support for the project. According to the final version of the Operational Programme Environment for the programming period 2014 – 2020, the best suited area of support for the project "Public building insulation" is "**Priority 5: Energy savings"**. Its specific objective number 5.1 is to "Reduce the energy demands of public buildings and increase the use of renewable energy source". Among supported activities under this objective belongs "reducing energy consumption by improving the thermal properties of construction of buildings, including further measures to reduce energy intensity buildings". Supported projects are:

- insulation of the building envelope,
- replacement and refurbishment (refurbishment) doors and windows,
- implementation of measures with proven impact on the energy performance of the building or improved indoor environmental quality etc.

Applicants can be municipalities, voluntary associations of municipalities etc. (Ministerstvo životního prostředí, 2015). For this reason it can be claim that this OP Environment, Priority 5: Energy savings is suitable for the suggested project.

Table 14 Identification of OP and specific area of support for the project "Public building insulation" in 2014-2020 (author's design)

Operation Programme:	Environment
Priority 5:	Energy Savings
Objective number 1:	Reduce the energy demands of public buildings and increase the use of renewable energy source
Specific Call:	Can be specified, when it opens

6.1.3 Project application

When is the project plan finished and proper operation program and specific area of support is chosen, applicant (our municipality) needs to check calendar of Calls and react on the actual Call to submit the application.

Application for subsidy from European Funds is submitted from 2014 online through application ISKP (Information system of End User). All administration of project is now online on Portal MS2014+, 2014, no need to visit authorities. New applicant need to register into portal, wait for registration text message and email and then enjoy all the convenience of this application like simplicity of application for subsidy, check reports of evaluators or see the points score which applicant obtained.

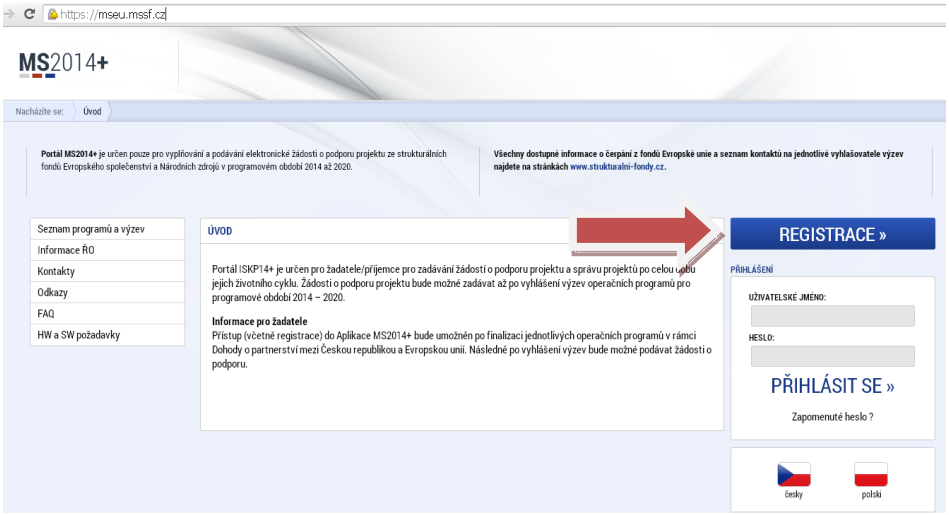


Figure 8 ISKP - registration (MS2014+, 2014)

After registration applicant can check important functions of ISKP. On the top of the page there are 3 tabs: notes, notifications and despatch. Clicking on notes, applicant can note something about the project and share it with other members of his team. By clicking on notifications applicant can check messages generated by system. Through despatch applicant can communicate with users of ISKP or with managing authorities.

From other 3 tabs labelled “Applicant”, “Evaluator”. “Strategy’s holder”, applicant is interested only about tab “Applicant”. Here can applicant check list of all his applications, he can submit new application for his project, check list of all actual Calls or see module CBA – analyses of costs and benefits of project.

Applicant (our municipality) will be able to submit his application when suitable Call will be opened. By the preliminary schedule of Calls for the OP Environment for 2015, Call 5.1 “Reducing the energy demands of public buildings and increase the use of renewable energy source”, which is the proper one for this project, will be open since 15th October 2015 till 5th January 2016 (Ministerstvo životního prostředí, 2015)

For dealing with the application through ISKP applicant (our municipality) needs to execute electronic signature. Without it applicant will not be able to submit application for subsidy for the project. (MS2014+, 2014)

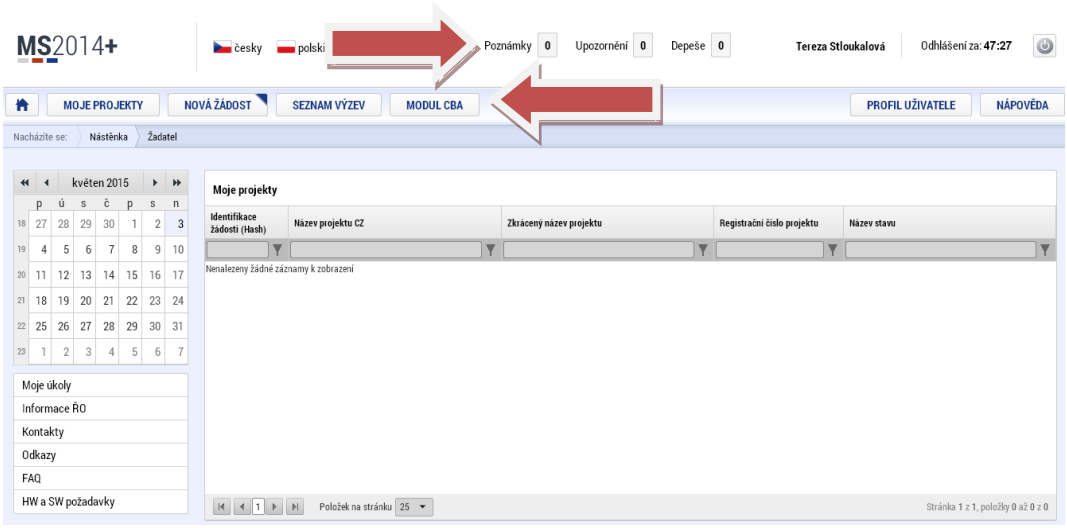


Figure 9 ISKP (MS2014+, 2014)

6.1.4 Supported documents for the application for subsidy

Successful request for subsidy from EU funds must include all required attachments. Mostly it includes project documentation in the case of construction or reconstruction project - this project. Furthermore, zoning decision and building permits are also required by building authority, then feasibility study, logical framework and extracts from the Land Registry must be included too (Centrum pro regionální rozvoj ČR, 2011).

- **Technical project documentation**

Content of technical project documentation is defined by the Building Act (Act no. 183/2006 Coll., On Territorial Planning and Building Code) and Implementation Directive (Reg. No. 499/2006 Coll., On Construction Documentation). Carefully crafted project documentation is the basis for successful project implementation. This is the basis from which other documents needed for application for a grant like timetable and itemized budget, emanate. Usually leaders of the municipality are not professional planners with the proper permissions, so it is necessary to contact professional company that will provide all the necessary documentation. Choosing high quality and reliable planner is very important in all phases of the project.

- **Business Plan**

It is an extension of project fiche.

- **Feasibility study**

Document (20-50 pages), which defines, whether the project is viable. In the case of our project "Public building insulation" in the feasibility study there will be described, how insulation, reconstruction of the building, prolongs useful life of the building, how there will be reduce energy consumption for heating including cost of fuel and all positive impacts of the project. Because this project is less financially demanding, simplified feasibility study is sufficient.

- **Cost – Benefit Analysis, CBA**

CBA is part of the Information system ISKP. Revenues and costs are evaluated not only in economic terms, but also public and environmental benefit of this project is described. The outcome of the CBA is financial statement of all costs and benefits, return on investment and feasibility of the investment in time. The data presented in the CBA are also important in demonstrating sustainability of the project after its implementation.

***Simplified Structure of CBA*:**

Cost of the project: 1 500 000 CZK

Benefits of the project: by replacement of the windows and doors and insulation of building envelope, the annual energy consumption for heating lowers by 40 % (Smarter house, 2015). Average annual cost for heating in 2014 for house using gas boiler were by Energostat, 2012, 75 000 CZK. This means annual saving of fuel 30 000 CZK. What is more, prices of energies are growing every day, meaning higher savings of expenses for energies in the future due to this project. Plus other public and environmental benefits like reducing negative environmental impact of heating, contributing to efficient use of energy resources and helping to overall improvement of the environment.

- **Logical framework**

Logical framework clearly maps out the intentions of the project, its expectations and it brings them into line with specific outputs and activities during implementing of the project. It is processes through which the applicant, our municipality, will be able to briefly, clearly and comprehensibly describe the project. Logical framework will serve to our municipality as a tool for continuous monitoring of the progress of the project.

Logical framework consists of 4 columns represented by:

a) Vertical logic of the project - Target Tree
b) Objectively verifiable indicators
c) Resources (information) to validate
d) Risks / assumptions that underlie achievement of results and project goals (Centrum regionální rozvoje ČR, 2011).

Logical framework matrix of this project is described in the following table. Its structure is recommended structure of logical framework by Centre for regional development of Czech Republic, 2011.

Table 15 Matrix of logical framework of the project (author's design)

Logical framework - project: Insulation of public building		**Name of the OP:**	OP Environment
Project applicant: Name of the municipality		**Total costs of the project:** 1 500 000 CZK	**Total acceptable costs:** 1 500 000 CZK
Intervention (tree of goals)	**Objectively verifiable indicators**	**Resources of information to verify**	**Other assumptions/risks**
Main objectives: Reduce energy consumption for heating of the municipal office. Main reason for realization of the project is the current unsatisfactory state of the building, which causes high heat consumption. **Objective of the priority 5: Energy savings** is "Reduce the energy demands of public buildings and increase the use of renewable energy source" (Ministerstvo životního prostředí, 2015)	The specific energy consumption of the building in kWh/m2. Annual bills from suppliers of energy for heating.	Energy Performance Certificate which must receive based on the European Directive 2002/91 / EC since 2009 every reconstructed building whose total floor area is greater than 1000 m2 - each larger apartment house, school or office. (EkoWATT, 2011)	
Purpose of the project: Decrease energy consumption for heating of the municipal office. Reduce costs for fuels and negative environmental impact of heating. Contribute to the efficient use of energy resources. Help to the overall improvement of the environment.	Decrease of energy consumption for heating by 40 %. Can be measured in CZK or in kWh/m2.	Annual bills from suppliers of energy for heating.	Interest of municipality leaders in this project. Choosing proper supplier. Corresponding implementation of measures by construction firm. Quality of used material and work.
Outputs of the project: Insulation of the building envelope will be realized using tiles from polystyrene plates, floors and ceiling will be insulated too and old windows and doors will be replaced by new plastic ones.	Building envelope will be better isolated due to greater wall thicknesses - polystyrene plates. New plastic doors and windows which provide better building insulation.	Monitoring reports, own project	Choosing of proper supplier - construction company. Corresponding implementation of measures by construction firm. Quality of used material and work. Implementation of the project on time. Financial resources of the municipality.

Activities of the project: **Preparatory phase:** •Identification of potential targets of support - the inadequate state of the municipal office building. •Identification of priority axes and areas of support from EU structural funds. •Implementation of the project feasibility study with positive results •Positive results of the analysis of the impact of the project on the environment **Implementation phase:** • Project launching • An application for a building permit • Entering a tender for the construction company, which will implement reconstruction • Assignment of project to the construction firm • Reconstruction of the municipal office-insulation • Continuous monitoring of construction works • Acceptance of construction work • Completion of the project **Operation phase:** • Continuous monitoring of the technical condition of the municipal office • Monitoring the amount of energy consumption for heating	**A list of measurable inputs necessary to secure project activities:** financial resources, technical project documentation, positive feasibility study, positive analysis of the impact of the project on environment, building permit, acceptance of construction work with positive result.	**Preparatory phase:** 2 months **Implementation phase:** 6 moths **Operation phase:** 5 years.	Ensuring financial resources, Choosing of proper supplier - construction company. Corresponding implementation of measures by construction firm. Quality of used material. Quality of work. Implementation of the project on time.
			Prior conditions: Announcement of specific Call in the program, issuance of building permits, approval of the representatives of municipality, successful acceptance of construction work of the building

- **Budget**

In all cases submission of the grant application must be followed by the development of the budget. This budget must be prepared in 2 forms: by funding sources and by type of costs that will be applied in the project. Simplified budgets of this project can be seen in the tables below. First table represents budget by type of costs and the second budget by funding sources.

Table 16 Budget of the project by types of costs (author's design)

Budget by types of costs	**Action**			
Expenses	**Unit of measure**	**Number of units**	**Price for unit in CZK**	**Costs in CZK**
Direct implementation costs: Investment costs				
Insulation of the building envelope	m2	250	1500	375000
Insulation of floor and ceilings	m2	200	1500	300000
New doors	pcs	5	15000	75000
New windows	pcs	16	14000	224000
Others	pcs	1	180000	180000
Project preparation, creative and technical supervision				
Project documentation to 5% of the total eligible costs of the action (construction documentation)	pcs	1	30000	30000
Feasibility study	pcs	1	10000	10000
Business plan	pcs	1	8500	8500
Applications, including filling in IS KP14 +	pcs	1	20000	20000
CBA	pcs	1	7500	7500
Cost for publicity				
Billboard 1 x 1.5 meters, with information about co-financing from the regional operational program occupying at least 25% of the area (symbol EU ROP SM logo, slogan, project name and possibly the type of project).	pcs	1	15000	15000
Cost for the publicity (new web site where must be by EU rules project described)	pcs	1	200000	200000
Costs of tenders	pcs	1	15000	15000
Costs of consulting project with experts	pcs	1	40000	40000
I. Total eligible costs[2]				1500000
II. Total ineligible costs				0
Total costs				1500000

[2] Eligibility of the costs is govern by the rules for applicants and beneficiaries of OPE 2014 – 2020. (Evropská Unie 2015)

Table 17 Budget of the project by funding sources (author's design)

	Costs of the project in CZK	% from total costs
Total costs of the project	1 500 000	100
Total eligible costs	1 500 000	100
Total ineligible costs	0	0
Project income	0	0
Total eligible costs without incomes	1 500 000	100
Equity of the applicant		
- Public resources	225 000	15
- Private funds	0	0
Subsidy		
- Subsidy from Regional development budget - EU	1 275 000	85
Total public resources	1 500 000	100
Applicant		
- Commercial loans	0	0
- Other sources	0	0
- Own financial sources	225 000	15

With the above mentioned attachments there will be required also following documents in the project application "Public building insulation":

- Financial statements (in the last two closed accounting period)
- Affirmation of indebtedness, proof of financing of the project.
- Proof of ownership of buildings (Excerpt from real estate register not older than 3 months).
- Staffing for the project (list of names of project managers, or at least the list of functions).

6.1.5 Project implementation

If the project is chosen to be financed from the EU funds, **agreement on financing** is prepared and implementation of the project can begin. Of course that it is highly recommended to read it in details because no further complaints are disregarded.

At this phase of the project the **selection process of the construction firm** will start **by the Public Procurement Act** and then there will be signed contract with the best supplier. Most grant programs require calls for tender in accordance with applicable law no. 137/2006 Coll., on Public Procurement, as amended.

Generally for applying for a subsidy, it is necessary to observe the principles of transparency, equal treatment and non-discrimination. In case of this project, when the estimated value of the subject of the contract for construction works, will exceed 500,000 - and will not exceed CZK 6 mil. CZK without VAT, this can be met respecting the following sequence (Centrum pro regionální rozvoj ČR, 2011):

1. The applicant shall request least 3 suppliers

2. These suppliers demonstrate by the applicant requested qualifications including proof of business license.

3. Tender procedure

a) The tender documents must contain:
- the subject of a public contract including technical specifications,
- requirement method of tender price,
- payment terms and eventually further requirements of the applicant

b) Criteria for evaluation of offers:
- the economic advantage of offers or lowest price.

d) Assessment and evaluation of offers will be carried out by the evaluation commission with a minimum number of 3 members.

e) Completion of the tender and contract: With the winning candidate there will be signed contract in accordance with the conditions of winning offer.

When the project, which is co financed from Structural funds, is implemented, it is necessary to deal with not only with the actual implementation of project activities but applicant must also deals with the demanding **administration** associated with project management, he must prepare monitoring reports, payment requests, etc.

Generally, it is necessary to realize some of the risks of project management and try to eliminate these risks during preparation and implementation of the project. Very useful is the continuous recording project management documentation, continuous monitoring of the implementation of the project budget, monitoring the implementation of the project outputs and indicators etc. (Centrum pro regionální rozvoj ČR, 2011).

Implementing phase will be finished by transmission building of municipal office from the contractor to the investor based on the acceptance of construction work of the municipal office building.

6.1.6 Operating phase of the project

Operational phase is the period after the project implementation, when will be building of the municipal office in operation. In this period, the project should increase operating cash flow of the project (saving on energy for heating of the building) and reduce investment cash flow. Consequently the benefits of the project should gradually top up the initial investment costs. Also monitoring of the annual billing from suppliers of energies begins. Liquidating phase is not part of this project. Reconstruction and insulation of the building prolongs useful life of the building and of course insulation will not be liquidated in the future.

6.1.7 SWOT

Through the SWOT analysis in this subchapter there will evaluate the strengths, weaknesses, opportunities and threats of the municipality, which asks for a subsidy from EU funds for its project “Public building insulation”.

Table 18 SWOT analysis (author's design)

SW OT	Helpful (to achieve the objective)	Harmful (to achieve the objective)
Internal origin (attributes of the municipality)	• A lot of experiences with the drawing money from EU funds for its projects • Selection of the right and experienced partner • Enough financial resources for pre-financing of the project (own budget or commercial loan) • Quality processing of project documentation • Regular checking of actual Calls • Previous ensuring of the construction – technical surveys • Carefully studying of the implementation documentation • Proper consultation of the project with project manager, competent authorities etc. • Professional project manager • Well-chosen commercial company that processes subsidy for the municipality (credible, solid and well experienced one) • Well-drafted contract between subsidy and the supplier of the construction works • Careful technical supervision of the investor over the construction works • Carefully counted financial expenditures on the project and finance manager, project coordinator, audit, expertise assessments, etc. • Proper administration of the project. • Know how to fully use of ISKP (information text messages, emails, communication with partners, project manager, authorities etc.)	• Few or no experiences with the drawing money from EU funds for its projects or selection of the wrong inexperienced partner • Insufficient financial resources for pre-financing of the project (failure to obtain loan) • Technical obstacles (for example increase in project costs because of the occurrence of additional works) • Poor-quality preparation of project documentation or no previous surveys • No checking of actual Call, late prepared project • Political leadership of the municipality, that because of the lack of knowledge about EU funds, neglects this possible source of financing • Poorly-drafted contract between subsidy and the supplier of the construction works • No technical supervision of the investor over the construction works or selection of cheap and bad suppliers • Omission of certain financial costs in the application or errors during administration (monitoring reports, monitoring indicators) • Sanctions imposed by the grantor for failure to meet deadlines or for unfulfilling of the indicators. • Unprofessional projects manager • No consultation of the project with project manager, competent authorities etc. or inadequate studying of the implementation documentation • Failure to comply the Public Procurement Act (the criminal liability or shortening of the subsidy) • Ineligible costs (for example item alcohol in a list of cost for catering)
External origin (attributes of the environment)	• Possibility to realize projects with the subsidy from EU Structural funds, which could not be realized without it (because of lack of finance resources) • Possible increase of competitiveness of the municipality through financing its projects from EU funds • New subsidies from EU Structural funds in programming period 2014 – 2020: new operational programs • Simplifying of projects administration during programming period 2014 – 2020 • For municipalities there is a change in 2014-2020, that there will no longer be the regional operational programmes for individual cohesion regions, but only a single integrated regional operational program • Simplification of applications for subsidy from EU funds since 2014 – ISKP (new information system of end user)	• Failure to obtain subsidy from EU funds even when the project application was properly fulfilled with all the necessary attachments and even when it fulfils all the EU's rules and regulations or unpredictable technical obstacles • Sudden changes in regional politics of the EU • Sudden changes in economy – economic crises • Natural disaster (which can destroy the building or ongoing insulation) • Sudden shortening of the amount of subsidy • Huge demands for administration of the projects, which can be for many small municipalities, which ask only for small financial subsidy, unbearable (the volume of work with the administration of the project implementation is not worth for the financial subsidy from EU) • Great demands for the administration of the infrastructural projects and large number of activities that municipalities must provide complicates their possibilities to select suitable projects and prepare an application.

6.1.8 Alternative sources of project funding

In case that municipality is not planning to finance its project from EU funds, there exist many other possibilities. Firstly if the municipality s big enough and dispose with budget large enough, it can finance it on its own, this is the least risky variant.

Another way how to get money for the project can be regional budgets. Individual regional offices create grant programs directed to different areas of the economy. Subsidy programs are specific to each region. It is best obtain information at the respective regional office. Except regional budgets there is also state budget. Ministries announce every year grant programs according to their areas of responsibility. Subsidy for this project could possibly obtain mainly through the Ministry of the Environment. In addition, some ministries have set up so-called funds that administer and redistribute certain types of subsidies. Each of the funds announces ongoing subsidy programs. Again, it is advised to obtain information at the contact point of the individual fund. And last but not least municipality can contact some commercial bank and apply for a loan.

6.2 Measures to increase the competitiveness

Municipalities have understood importance of its opportunities as well as obstacles for growth and development of local economy, entrepreneurship and development of investments which all together determines competitiveness of the municipality. Competitiveness of a municipality could be achieved if leaders of municipalities demonstrate interest and contribute with human and material resources to create appropriate framework that would be suitable and sufficiently friendly for renovation of existing investments and for new investments and job creation.

In chapter 5 there were founded out factors of competitiveness of municipalities with extended power. Here are suggested proposals how to use these factors to increase local competitiveness.

Number of inhabitants of the municipality and total population growth (positive influence on the competitiveness): Leaders of municipalities from the interview admitted, that this factor determinates size of the municipality's budget and for this reason trying attracting new inhabitants into the municipality should be one of the main objective and long term strategy of the local government. In the regression analyses there was confirmed positive relationship between number of inhabitants of the municipality including population growth and competitiveness of the municipality as well.

Number of completed flats (positive influence on the competitiveness). Representatives of the municipalities also stated in the research that housing is closely interconnected with the first two mentioned factors. New housing infrastructure is the reason why many young people are moving into the municipalities from near cities when they want to establish a family etc. as for example stated respondent B.

This is a reason why leaders of municipalities should support development of housing infrastructure projects in their municipality in their long term strategies.

As leaders of municipalities in the interviews stated it was also confirmed within the regression analyses, that **number of medium businesses, number of large businesses**, and **number of companies in knowledge intensive sectors** are important factors which positively influence regional competitiveness. On the other hand **unemployment rate** harms it. Just as respondents stated in the interviews, many companies near the municipality means many available jobs which can cause possible migration into the municipality. Moreover it is the companies in knowledge intensive sector dealing with the innovation and technologies which are largely driving the economy. And therefore creating and attractive environment for businesses and promoting cooperation between companies and municipalities should be another long term strategy of the leaders of the municipalities.

Despite the fact that not all the respondents were sure about the direct impact of culture, tourism and healthcare on the competitiveness of the municipality, it was founded out that **number of doctors' surgeries, tourist services and culture facilities** positively influence the regional competitiveness (RCI). Therefore municipal leaders could in their long-term strategies strive to promote culture, health care and tourism too.

Accessibility to region city influences the regional competitiveness too. It was confirmed what respondents stated in the interviews - that the bigger distance is between the municipality and the region town, the lower municipality's competitiveness level is. This factor cannot be influenced by leaders of municipalities. But on the other hand leaders can fight for the improvement of the quality of roads and for the new bus or train stops for their inhabitants in their strategies.

Some of the respondents who were optimistic about possibilities of drawing money from EU's funds claimed in the research that number of realized projects in the municipality which are co financed from the Structural funds can have a positive impact on the competitiveness of this municipality. This suggestion has been confirmed in the regression analysis. **Number of realized projects with the subsidy from Structural Funds** has showed to be significant factor of regional competitiveness (it significantly and positively influences RCI). For this reason mayors of municipalities and also its representatives should support new projects - new investments in their communities. And financing from EU funds can be a source of finance which can help them with realization of these projects. But there are many **rules and recommendations which need to be followed to obtain the grant from EU's funds:**

- If the applicant (mayor or representatives of the municipality) have no experiences in the process of drawing money from EU funds, better is to find **experienced partner** (for example other municipality). Valuable advices provided by the partner can make this process much easier for the applicant. If no experienced partner can be found, applicant can also use services of the spe-

cialized companies, who are helping him with the subsidy. Careful selection of this company is essential for the applicant. Company must be credible, solid and well experienced.

- Applicant must in advance count with the fact that he has to pre-finance the project from his own pockets. Therefore, it is necessary to have **financial reserve** large enough.
- Project need to be firstly very carefully prepared with all the details. Therefore careful compilation of all the **project documentation** and providing of previous surveys can prevent future troubles with it (technical problems or omission of certain financial costs in the budget etc.)
- **Consult, consult and consult!** Applicant need to find a professional project manager and consult the project with him and also with the competent authorities which can help to orientate in the process of getting subsidy. Also thorough studying of implementation documentation is necessary.
- **Proper selection of the suppliers** (for example supplier of construction works). Supplier must be chosen in accordance with applicable law no. 137/2006 Coll., on Public Procurement, as amended. For failure to comply the Public Procurement Act, it threatens to the applicant the criminal liability or shortening or full returning of the subsidy! And of course subsequent careful preparation and studying of contract with the best supplier is necessary.
- During the implementation phase of the project, careful technical **supervision** of the investor over the construction works is necessary. Painstakingly counted financial expenditures on the project during implementation and finance manager, project coordinator, audit, expertise assessments, etc. are also important part of supervision over the project.
- Proper **administration** of the project. During implementation of the project, applicant for the subsidy must properly prepare monitoring reports, payment requests, etc.

7 Discussion

Thesis dealt with the issue of competitiveness of Czech municipalities and possibilities how to increase it through the subsidies which offers EU's Structural funds. But term competitiveness has no precise definitions and different authors are defying it in a different ways. Moreover there exists no united commonly and generally used list of the factors which are influencing competitiveness of municipalities. Several authors are creating these lists in a several forms.

When it comes to competitiveness o Czech municipalities, they were evaluated in term of its competitiveness only once. It was done by the Ministry for Regional Development which has used a method of European Commission to evaluate Czech municipalities with extended powers in term of their competitiveness and it also scored competitiveness points to municipalities with EP.

Identification of factor of regional competitiveness from local point of view was carried out thought qualitative research. Leaders of municipalities, respondents, finally suggested several methods of possible measurement of competitiveness of their municipalities. Respondents had almost the same opinions about the population, housing, labour market or infrastructure in the municipality. They claimed that these factors are directly influencing competitiveness of the municipalities (more inhabitants of the municipality, which is also caused by availability of the jobs or housing, means bigger budgets of the municipalities and higher competitiveness).

But when it comes to subsidies from EU's funds, not all of them were optimistic about this opportunity of increasing competitiveness of the municipalities. There was showed that representatives of small municipalities who have a lot of work with everyday tasks of the running the municipality do not have enough time to prepare projects and ask for the subsidy from EU Funds. And moreover administration with is connected especially with the infrastructural projects is so large, that it is not worth for the little financial demanding projects.

On the other hand few respondents were more optimistic about this opportunity, which EU offers to their municipalities. But it is necessary to fulfil all the rules and requirements to obtain a subsidy because for example failure to comply the Public Procurement Act can causes shortening or full returning of the subsidy and criminal liability threatens to the applicant.

When it comes to the possibilities of asking for a subsidy from Structural funds in the current programming period 2014 – 2020, there is a lot of news for the applicants. What is more European Commission have started approving Czech Operation programmes only since April 2015 (Ministerstvo místního rozvoje, 2014). There are many news in case of application for a subsidy, new specific areas of support, new project are supported etc. and till now there do not exists many manuals for applicants where to draw information and advices.

8 Conclusion

Balance between social, economic and environmental pillar is very important for economic development of the region or municipality and leaders of municipalities must understand importance of its opportunities as well as threats for growth. Joining European Union can represent also such an opportunity for the Czech municipalities.

Competitiveness of the local economy is determined by all its participants like entrepreneurs, their investments and leaders of municipalities should demonstrate their interest and contribute to creating appropriate framework that would be sufficiently friendly for renovation of existing investments and for new investments and job creation.

When it comes to the Czech Republic, there exist regions and cities which are very competitive like capital Prague, but also regions with worse performance like Bruntál in Moravian-Silesian Region. Ministry for Regional Development has already carried out division of municipalities with extended powers according to their competitiveness based on the methodology of European Commission. This analysis is an important part of Strategy of regional development of Czech Republic for the time period 2014 – 2020. But question is what the factors of competiveness of the municipality are and how can be this competitiveness improved?

Within this thesis was completed qualitative research which was supposed to find out the answer to this question. There have been completed interviews with mayors and representatives of municipalities. Interviews were divided into four big blocks, which were interrelated with competitiveness of municipalities and the aim was to find out, which factors related to these blocks considers respondent as significant for determination of competitiveness of municipality. Blocks were determined as territorial cohesion, regional competitiveness, environmental sustainability and EU subsidies.

Within the first block of questions, all respondents had almost the same opinion about the population, housing, labour market or infrastructure in the municipality. In their eyes these factors are directly influencing competitiveness of the municipalities because the more inhabitants live in the municipality the higher budget is municipality operating with. And availability of the jobs or housing is very important for attracting new inhabitants. For this reason suggested factors of competitiveness were number of inhabitants plus net migration and population growth, number of annually completed flats and availability of shops and finally unemployment rate plus number of jobseekers.

Education, culture, sport and social services, healthcare and general atmosphere in the municipality were also topics discussed within this block of questions. But opinions of respondents about influence of these areas on the competitiveness of the municipalities differed. Nevertheless there were proposed several factor of regional competitiveness by the respondents. It was number of schools together with the number of libraries and availability of universities plus number of culture,

sport and social facilities, number of doctors' offices or hospitals and last but not least level of criminality which determines atmosphere of the municipality.

In the second part of the interview, research tried to find out which factors determine economic potential of the municipality and city. All respondents conceded that infrastructure has big influence on competitiveness of the municipality and accessibility to region city and density and quality of the motorways were suggested as possible determinant of competitiveness. Area business environment efficiency of resources and innovations and technologies also was under a huge discussion. All respondents agreed that presence of companies in the municipality or city does not mean only availability of jobs but also potential development of the area. For this reason number of companies, number of companies which operate and quality of HR in knowledge intensive sector was devised as possible way of measurement.

When it comes to tourism, respondents did not mostly believe in great importance of this area in context of the competitiveness of municipality. Despite it number of tourist services and attractiveness of the surroundings were promoted as possible determinants of competitiveness.

Third block of questions was dedicated to environment and sustainability. In this case all respondents agreed that this area has a huge importance nowadays and some of them said that it can have direct impact also on municipalities and its competitiveness. Fresh air, level of pollution, clear water or saving energy for example in form of insulation of buildings and level of using renewable energies were suggested as potential method of measurement.

Final part of the interview was dedicated to the respondents' view on drawing money from EU's Structural funds for projects of the municipalities as a possible tool of increasing the competitiveness of municipalities or cities. They opinions differ according to their experiences with financing of their projects from EU's funds. There was showed that representatives of small municipalities who have a lot of work with everyday tasks of the running the municipality do not have enough time to prepare projects and ask for the subsidy from EU Funds. There also feared of huge administration with is connected especially with the infrastructural projects and claimed that co financing projects from EU's funds can be very risky.

On the other hand few respondents were more optimistic about it. They say that through Structural Funds they can afford to finance projects which would be impossible to implement without it. Within this block of interview there were proposed two ways of measurement of competitiveness. It was number of realized projects with the financial subsidy from EU as first possible measurement of competitiveness and also amount of drawn money from EU's funds for local projects as second possible factor of local competitiveness.

After compilation of all suggested factors of competitiveness by the leaders of municipalities there was performed regression analysis which goal was to find out only factors which have significant influence on the regional competitiveness of municipalities with extended powers defined by Ministry of RD in its Strategy 2014 - 2020. There was also found out the relationship between competitiveness

of MEP and its determinants. Dependent variable in the analysis was the competitiveness of municipalities represents by index of regional competitiveness and independent variables were factors suggested by leaders of municipalities within the interviews. Unfortunately few competitiveness factors identified by leaders of municipalities cannot be found on the level of NUTS 5, because Czech Statistical Office, Ministry of Industry and Trade of the Czech Republic or others are collected them on the higher levels or not at all and for this reason they could not be used in regression analysis.

By dropping all non-significant variables, competitiveness of municipalities with extended powers defined by Ministry of Regional Development showed to be function of these 12 factors of competitiveness (plus sign means positive influence of the factor on the regional competitiveness and minus sign means negative effect of the factor on level of competitiveness):

- Accessibility to region city
+ Number of completed flats
+ Number of doctors surgeries
+ Number of culture facilities
- Unemployment rate
+ Number of inhabitants
+ Total population growth
+ Number of medium businesses
+ Number of large businesses
+ Number of companies in knowledge intensive sectors
+ Number of realized projects with the subsidy from EU Funds
+ Number of tourist services

Because number of projects realized in municipality with the financial support from EU Structural Funds showed to be important for the competitiveness of the municipality there was be prepared and example of the project plan for municipality, specific type of public enterprise, accounting and tax unit with its own budget, through which can municipality apply for subsidy from Structural funds within the Operation program Environment. Idea to create such a project plan together with a simple instructions for applicant - how to request for subsidy from EU funds, was chosen because new programming period 2014 – 2020 started only last year and it brought many news for applicants. What is more European Commission started to approve Czech Operation programmes only since April 2015 and till now there do not exists many manuals for applicants where to draw information and advices.

Theme of the project (Public building insulation) was chosen taking into account suggestions of leaders of municipalities within the qualitative research, who proposed saving energies for example in form of insulation of buildings as possible factor of regional competitiveness. Similar project plan can be generally applied by municipality planning insulation for example of its office, cultural centre, nursery

school etc. Suitable candidate for such a subsidy, which can also use this project plan, is also public benefit corporation, university, public research institutions etc. Prepared project plan was be subsequently forwarded to representative of the municipality who participated in the interview and who showed the interest for it. It was respondent who acts in a municipality which has never ask for a subsidy from EU Structural Funds because its mayor is not very optimistic about it but this representative of municipality wants to change it and use this financial opportunity for the local projects.

Consequently in the end of the thesis there were prepared measures ad recommendations for Czech municipalities how to improve their competitiveness through financing from EU funds.

Some of the respondents who were optimistic about possibilities of drawing money from EU's funds claimed in the research that subsidies from EU's Funds can help to improve regional competitiveness. This suggestion has been also confirmed in the regression analysis because number of realized projects with the subsidy from Structural Funds has showed to be significant positive factor of regional competitiveness. For this reason mayors of municipalities and also its representatives should support new projects - new investments in their communities. And financing from EU funds can be a source of finance which can help them with realization of these projects. But there are many rules and recommendations which need to be followed to obtain the grant from EU's fund like finding an experience partner or commercial company which executes the request for the subsidy, having financial reserve large enough to pre-finance the project, carefully preparing project documentation and consulting project with professional project manager and competent. Of course it is also necessary to properly select the suppliers who must be chosen in accordance with applicable law no. 137/2006 Coll., on Public Procurement, as amended. For failure to comply the Public Procurement Act, it threatens to the applicant the criminal liability or shortening or full returning of the subsidy! During the implementation phase of the project, careful technical supervision of the investor over the construction works is necessary and proper administration of the project too.

Also some limitations for municipalities which ask for the subsidy for their projects exist. Firstly applicant for the subsidy (municipality or enterprise) should carefully reconsider whether the request for support from Structural Funds for their project has ever sense because especially administration of the infrastructural projects is very difficult and has no sense for the little financial demanding projects. There also exist other ways how to obtain subsidy for regional projects. If the municipality s big enough and dispose with budget large enough, it can finance it on its own which is the least risky variant. Another way how to get money for the project can be regional budgets or state budget.

Also if the representatives of municipality have too many everyday tasks to deal with and no time for preparing project plan and requesting for the subsidy it is better to contact some credible and solid commercial company which will process the application and implementation of the project for them.

9 List of literature

ANNONI, Paola a Kornelia KOZOVSKA. JRC EUROPEAN COMMISSION. EU Regional Competitiveness Index 2010. Italy: Luxembourg: Publications Office of the European Union, 2010, 277 s. ISBN 978-92-79-15693-9.

BACHE, Ian. The politics of European Union regional policy: multi-level governance or flexible gatekeeping?. Sheffield, England: Sheffield Academic Press, 1998. ISBN 18-507-5863-8.

BUDÍKOVÁ, Marie, Maria KRÁLOVÁ a Bohumil MAROŠ. Průvodce základními statistickými metodami. První vydání. Praha: Grada Publishing, a.s., 2010. ISBN 978-80-247-3243-5.

CAPELLO, R., NIJKAMP, P., et al. (2009): Handbook of Regional Growth and Development Theories, Edward Elgar Publishing Limited, Cheltenham. 542 p.

CAMAGNI, Roberto. On the Concept of Territorial Competitiveness: Sound or Misleading?. 2002. ISBN 10.1787/9789264079410-5-en. Available from: http://wuw-ruw.wu-wien.ac.at/ersa/ersaconfs/ersa02/cd-rom/papers/518.pdf

CENTRUM PRO REGIONÁLNÍ ROZVOJ ČR. Jak připravit a řídit projekt "v kostce" [online]. 2009, 2011 [cit. 2015-05-02]. Available from:http://ap3.crr.cz/cs/odkazy/projekt-v-kostce/vytipovani-financnich-zdroju/

CORVERS, F. (2003): Indicators for Regional Innovation Performance. International Conference on Entrepreneurship and Business Incubation „Strengthening the Regional Innovation Profile“, Bremen, 16-17 October 2003. Available from: http://www.cisv. org.

DANILOV, I.P. (2007): Konkurentosposobnost regionov Rossiji (teoretiočeskije osnovy i metodologija). Vydavatelstvi Kanon+ ROOI Reabilitacija, Moskva 2007, ISBN 978-5-88373-023-7.

EkoWATT: Centrum pro obnovitelné zdroje energie [online]. 2011. [cit. 2015-05-07]. Available from: http://www.ekowatt.cz/cz/informace/uspory-energie/prukaz-energeticke-narocnosti-budovy

Energostat: Energetika v ČR, EU: informace, komentáře, data, zákony [online]. 2012. [cit. 2015-05-05]. Available from: http://energostat.cz/ceny-energii.html

EUROPEAN COMMISSION. Regional Policy: InfoRegio [online]. 2014 [cit. 2015-05-03]. Available from:http://ec.europa.eu/regional_policy/en/faq/#1

EU regional competitiveness index (RCI 2013). Luxembourg: Publications Office, 2013. ISBN 978-927-9323-706.

EUROPEAN COMMISSION (EC) (2004): European Competitiveness Report 2004, Enerprise and Industry Publications, European Communities, Brussels.

EU, Evropská komise. Politika soudržnosti 2014-2020: investice do růstu a zaměstnanosti. Lucemburk: EUR-OP, 2011. ISBN 978-927-9214-868

EVROPSKÁ ROZVOJOVÁ AGENTURA. Projekty mezinárodní spolupráce po roce 2014: Jak do projektů úspěšně vstoupit a efektivně je implementovat [online]. 2014[cit. 2015-04-30]. Available from: http://eracr.cz/wp-content/uploads/2014/02/Projekty-mezinarodni-spoluprace-po-roce-2014-Jak-do-projektu-uspesne-vstoupit-a-efektivne-je-implementovat.pdf

EVROPSKÁ UNIE. 2015. Evropské strukturální a investiční fondy: Operační program životní prostředí [online]. [cit. 2015-05-07]. Available from: http://www.opzp.cz/obecne-pokyny/dokumenty

FOTR, J. Podnikatelský záměr a investiční rozhodování. Vydání první. Praha: GRADA Publising, a.s., 2005. 356 s. ISBN 80-247-0939-2.

GARELLI, S., Ed. (2009): IMD world competitiveness yearbook: 2009.Lausanne: International Institute for Management Development, 544 p. ISBN 978-2-9700514-3-5.

GORE, Charles. Regions in question: space, development theory and regional policy. [Reprint]. London: Routledge, 2010. ISBN 978-041-5608-916. Available from: https://books.google.cz/books?id=brllAgAAQBAJ&pg=PA2&dq=regions+in+question&hl=cs&sa=X&ei=yHvDVKH6LoHeUvS0goAB&ved=0CB8Q6AEwAA#v=onepage&q=regions%20in%20question&f=false

GUJARATI, Damodar N. Basic econometrics. 4th ed., Tata McGraw-Hill ed. New Delhi: Tata McGraw-Hill, 2004. ISBN 978-007-0597-938.

HENDL, Jan. Kvalitativní výzkum: základní teorie, metody a aplikace. 3. vyd. Praha: Portál, 2012, 407 s. ISBN 978-80-262-0219-6.

HRDÝ, M. Hodnocení ekonomické efektivnosti investičních projektů EU. Vydání první. Praha : ASPI, a.s., 2006. 204 s. ISBN 80-7357-137-4.

HUŠEK, R.:Ekonometrická analýza, 2007, nakladatelství Oeconomica, Praha.

HUGGINS, R. (2003): Creating a UK Competitiveness index: Regional and local benchmarking. Regional Studies Vol. 37, 89 – 96, 2003.

JACQUEMIN, A. and PENCH, L. (1997) Europe Competing in the Global Economy: Reports of the Competitiveness Advisory Group. Cheltenham: Edward Elgar.

KLVAČOVÁ, E., (2007b): Velký dostih konkurenceschopnosti zemí a světových regionů. In: KLVAČOVÁ, E.; MALÝ, J.; MRÁČEK, K.: Základy evropské konkurenceschopnosti. Praha: Professional Publishing. ISBN 978-80-86946-54-2 4.

MARTIN, Ron. Regional competitiveness. London [u.a.]: Routledge, 2006. ISBN 04-153-9190-3.

Metodická podpora regionálního rozvoje [online]. 2013 [cit. 2015-03-07]. Available from:http://www.regionalnirozvoj.cz/index.php/zakladni-legislativa-regionalni-politiky-v-cr.html

MEZINÁRODNÍ ÚČETNÍ STANDARD IAS 20. Mezinárodní účetní standard IAS 20.

MINISTERSTVO PRO MÍSTNÍ ROZVOJ. Evropské strukturální a investiční fondy [online]. 2014 [cit. 2015-01-24]. Available from: http://www.strukturalni-fondy.cz/cs/Fondy-EU

MINISTERSTVO PRO MÍSTNÍ ROZVOJ. STRATEGIE REGIONÁLNÍHO ROZVOJE ČR 2014–2020. 2013. Available from: http://www.mmr.cz/getmedia/08e2e8d8-4c18-4e15-a7e2-0fa481336016/SRR-2014-2020.pdf

MINISTERSTVO ŽIVOTNÍHO PROSTŘEDÍ. Operační program životní prostředí: pro vodu, vzduch a přírodu [online]. 2014 [cit. 2015-05-04]. Available from: http://www.opzp2007-2013.cz/sekce/526/uplny-prehled-podporenych-projektu/

MINISTERSTVO ŽIVOTNÍHO PROSTŘEDÍ. Programový dokument OPŽP: pro programové období 2014-2020 [online]. 2015 [cit. 2015-05-03]. Available from: http://www.opzp2007-2013.cz/soubor-ke-stazeni/54/16257-9_verze_opzp__2014_2020_rev.pdf

MINISTERSTVO ŽIVOTNÍHO PROSTŘEDÍ. 2015. Předběžný harmonogram výzev pro OPŽP na rok 2015 [online]. [cit. 2015-05-07]. Available from: http://www.opzp.cz/dokumenty/download/28-1-16253-04_predbezny_harmonogram_vyzev_opzp_na_rok_2015.pdf

MS2014+ [online].2014 [cit. 2015-05-03]. Available from: https://mseu.mssf.cz/

OECD (2007): Staying Competitive in the Global Economy: Moving Up the Value Chain (Synthesis Report). P. 125, June 2007. ISBN: 978-92-64-03365-8.

OECD (2008): Staying Competitive in the Global Economy: Compendium of Studies on Global Value Chains. P. 248, June 2008. ISBN: 978-92-64-04630-6.

REGION SOUDRŽNOSTI JIHOZÁPAD. 2014. Nové dotační příležitosti z EU 2014–2020 [online]. [cit. 2015-05-09]. Available from: http://www.rr-jihozapad.cz/dokumenty/tiskove-centrum/ROP-Jihozpad-Nov-dotan-pleitosti-z-EU-2014%E2%80%932020.pdf

REŽŇÁKOVÁ, M. Finanční management 1. díl: Studijní text pro kombinovanou formu studia. Vydání první. Brno: Akademické nakladatelství CERM, s.r.o., 2008. 183 s.

Smarter house: Building envelope [online]. 2015. [cit. 2015-05-05]. Available from: http://smarterhouse.org/home-systems-energy/building-envelope

TAUER, V., ZEMÁNKOVÁ, H.; ŠUBRTOVÁ, J. Získejte dotace z fondů EU: Tvorba žádostí projektu krok za krokem. Vydání první. Brno: Computer Press, a.s., 2009. 160 s. ISBN 978-80-251-2649-3.

TUROK, Edited by John Bachtler and Ivan, Ivan TUROK. The coherence of EU regional policy contrasting perspectives on the structural funds: Contrasting Perspectives on the Structural Funds. London: J. Kingsley Publishers, 1997. ISBN 11-360-3528-1. Available from: https://books.google.cz/books?id=az5dAgAAQBAJ&pg=PP6&lpg=PP6&dq=The+Coheren-

ce+of+EU+Regional+Policy+Bachtler+Turok+ISBN&source=bl&ots=JrooHdu4eW&sig=tPFx2mhX3lAgJXN3OHbkZdYB5kY&hl=cs&sa=X&ei=vHnDVOPiAsS8UeadgM-gG&ved=0CC0Q6AEwAA#v=onepage&q=The%20Coherence%20of%20EU%20Regional%20Policy%20Bachtler%20Turok%20ISBN&f=false

TVRDOŇ, J., ŠURANOVA, J. (2007): Teoreticke a prakticke otazky vyjadrenia regionalnej konkurenceschopnosti v ekonomike Slovenska. In: 2nd Central European Conference in Regional Science.

Veřejná zpráva [online]. 201 [cit. 2015-03-07]. Available from: http://www.verejnasprava.estranky.cz/clanky/1.-verejna-sprava.html

WOOLDRIDGE, Jeffrey M. Introductory econometrics: a modern approach. 4th ed. Mason, OH: South Western, Cengage Learning, c2009, xx, 865 p. ISBN 03-246-6054-5.

WOKOUN, René. Theoretical and Methodological Approaches to Research on Regional Competitiveness. 2010. Available from: http://www.vse.cz/rst/abstrakt.php?IDcl=24

9.1 Legal regulation

COUNCIL REGULATION (EC) no. 1083/2006 of 11 July 2006 laying down general provisions on the European Regional Development Fund, European Social Fund and the Cohesion Fund and repealing Regulation (EC) no. 1260/1999

COUNCIL REGULATION (EC) no. 1084/2006 of 11 July 2006 on the Cohesion Fund and repealing Regulation (EC) no. 1164/94

REGULATION OF THE EUROPEAN PARLIAMENT AND COUNCIL REGULATION (EC) no. 1080/2006 of 5 July 2006 on the European Regional Development Fund and repealing Regulation (EC) no. 1783/1999

REGULATION OF THE EUROPEAN PARLIAMENT AND COUNCIL REGULATION (EC) no. 1081/2006 of 5 July 2006 on the European Social Fund and repealing Regulation (EC) no. 1784/1999

REGULATION OF THE EUROPEAN PARLIAMENT AND COUNCIL REGULATION (EC) no. 1082/2006 of 5 July 2006 on a European grouping of territorial cooperation (EGCC)

PROVÁDĚCÍ VYHLÁŠKA (vyhláška č. 499/2006 Sb., o dokumentaci staveb),

STAVEBNÍ ZÁKON (zákon č. 183/2006 Sb., o územním plánování a stavebním řádu)

ÚSTAVNÍ ZÁKON č. 347/1997 Sb., o vytvoření vyšších územních samosprávných celků, Sbírka zákonů.

ZÁKON č. 2/1969 Sb., o zřízení ministerstev a jiných ústředních orgánů státní správy České republiky. Sbírka zákonů.

ZÁKON č. 110/2007 Sb. o některých opatřeních v soustavě ústředních orgánů státní správy, souvisejících se zrušením Ministerstva informatiky a o změně některých zákonů. Sbírka zákonů.

ZÁKON č. 128/2000 Sb. O obcích (obecní zřízení). Sbírka zákonů.

ZÁKON č. 129/2000 Sb., o krajích (krajské zřízení). Sbírka zákonů.

ZÁKON č. 218/2000 SB., o rozpočtových pravidlech a o změně některých souvisejících zákonů (rozpočtová pravidla). Sbírka zákonů.

9.2 List of sources of data

Česká televize: Čerpání dotací [online]. 2015 [cit. 2015-04-21]. Available from: http://www.ceskatelevize.cz/ct24/podzimni-volby/cerpani-dotaci-v-obcich/

Český Statistický úřad [online]. 2013 [cit. 2015-04-21]. Available from: http://vdb.czso.cz/mos/

Google Maps [online]. 2014 [cit. 2015-04-21]. Available from: https://www.google.cz/maps/

Ministerstvo průmyslu a obchodu [online]. 2013 [cit. 2015-04-21]. Available from: http://www.mpo.cz/

Regionální informační servis [online]. 2014 [cit. 2015-04-21]. Available from: http://www.risy.cz/cs

Appendix

A Structure of interview

INTERVIEW: FACTORS OF REGIONAL COMPETITIVENESS

Block 1: Territorial cohesion (living conditions for the population and socio – economic problems)

- Population
- Housing
- Labour market
- Education
- Culture, sports and social services
- Healthcare
- Atmosphere

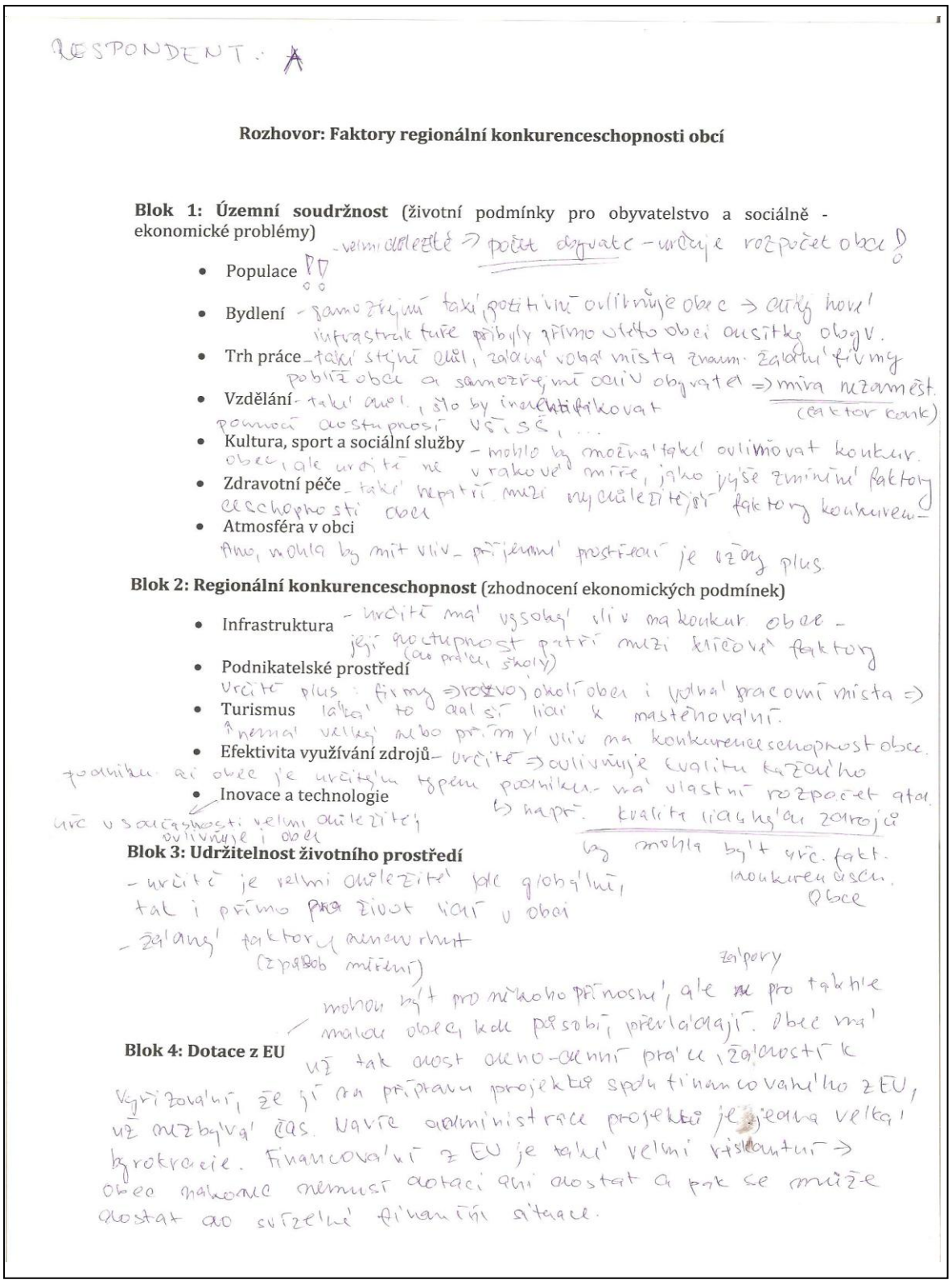
Block 2: Regional competitiveness (assessment of the economic conditions)

- Infrastructure
- Business environment
- Tourism
- Efficiency of resources
- Innovation and technologies

Block 3: Environmental sustainability

Block 4: EU subsidies

B Specimen of interview



RESPONDENT: A

Rozhovor: Faktory regionální konkurenceschopnosti obcí

Blok 1: Územní soudržnost (životní podmínky pro obyvatelstvo a sociálně - ekonomické problémy)

- Populace
- Bydlení
- Trh práce
- Vzdělání
- Kultura, sport a sociální služby
- Zdravotní péče
- Atmosféra v obci

Blok 2: Regionální konkurenceschopnost (zhodnocení ekonomických podmínek)

- Infrastruktura
- Podnikatelské prostředí
- Turismus
- Efektivita využívání zdrojů
- Inovace a technologie

Blok 3: Udržitelnost životního prostředí

Blok 4: Dotace z EU

C Data for regression analyses

Table 19 Data A for regression analyses

Municipality with EP	Value of index of regional competitive-ness	Accessibility to region city in min	Number of fin-ished flats	Doctors surgeries	Hospitals	Social services	Nursery schools	Elementary schools
Blansko	92	31	48	43	1	14	7	6
Boskovice	77	43	47	43	1	8	1	2
Brno	122	0	1182	288	10	157	156	96
Břeclav	107	48	48	44	1	10	10	6
Bučovice	77	33	6	10	0	0	1	2
Hodonín	92	54	8	49	1	18	6	5
Hustopeče	92	29	17	42	1	0	2	3
Ivančice	77	34	27	16	1	1	5	5
Kuřim	122	20	10	16	0	1	1	2
Kyjov	62	52	14	51	0	11	8	6
Mikulov	77	42	20	25	0	2	2	3
Moravský Krumlov	62	45	7	15	0	2	1	2
Pohořelice	92	26	23	12	0	1	1	2
Rosice	107	23	85	18	0	0	2	1
Slavkov u Brna	107	24	56	17	0	3	2	3
Šlapanice	122	19	56	37	0	0	2	1
Tišnov	92	33	12	21	1	2	3	3
Veselí nad Moravou	77	75	17	38	0	4	2	2
Vyškov	107	32	12	37	1	10	12	7
Znojmo	92	56	46	84	1	15	10	7
Židlochovice	122	24	34	24	0	1	1	1
Hranice	107	35	29	39	1	7	9	6
Jeseník	77	97	20	28	1	14	4	1
Konice	77	37	2	15	0	0	1	1
Lipník nad Bečvou	92	28	7	8	0	0	4	5
Litovel	92	20	9	25	0	0	4	5
Mohelnice	107	25	12	13	0	2	3	3
Olomouc	122	0	253	144	2	58	34	26
Prostějov	92	18	59	97	1	14	12	11
Přerov	92	27	26	80	2	19	16	11
Šternberk	77	21	26	22	1	4	2	4

Šumperk	77	46	8	69	1	15	5	8
Uničov	107	28	19	20	0	6	1	5
Zábřeh	77	36	17	28	1	10	5	5
Bystřice pod Hostýnem	77	31	5	19	0	0	5	2
Holešov	92	22	2	19	0	1	3	4
Kroměříž	92	27	32	60	1	16	11	9
Luhačovice	92	25	17	15	0	3	1	1
Otrokovice	122	15	7	33	0	14	1	4
Rožnov pod Radhoštěm	92	68	20	33	1	4	5	7
Uherské Hradiště	92	31	71	97	1	12	5	9
Uherský Brod	77	28	16	48	1	11	8	7
Valašské Klobouky	62	41	4	23	0	0	1	2
Valašské Meziříčí	92	54	1	40	1	14	10	9
Vizovice	92	17	5	19	1	1	1	2
Vsetín	77	35	16	55	1	23	11	7
Zlín	107	0	42	94	2	37	27	17

Municipality with EP	High and grammar schools	Libraries	Culture facilities	Sport facilities	Unemployment rate	Job seekers	Number of inhabitants	Total population growth
Blansko	8	8	9	37	8	2312	20845	5,2
Boskovice	11	4	14	20	11	2653	11478	1,9
Brno	91	41	178	510	9,2	18590	377508	-2,2
Břeclav	7	1	8	33	12	3812	24956	-1
Bučovice	2	5	5	14	10,7	863	6464	2,4
Hodonín	5	3	9	24	16,3	5256	25049	-1,5
Hustopeče	5	1	3	7	10,3	1774	5862	0,9
Ivančice	1	1	4	15	10,6	1176	9580	-2
Kuřim	3	1	9	14	8,3	760	10900	10,9
Kyjov	7	1	6	26	13,9	3880	11448	-0,8
Mikulov	4	1	8	11	12,5	1306	7416	3,3
Moravský Krumlov	5	1	10	11	12,6	1380	5846	-1
Pohořelice	0	3	5	7	11,3	701	4711	11,1
Rosice	0	1	5	6	10,1	1086	5865	7,5

Slavkov u Brna	3	1	8	11	8,2	845	6299	9,6
Šlapanice	1	1	9	9	7,7	1990	7171	14,8
Tišnov	4	1	5	26	10,5	1362	8921	7,3
Veselí nad Moravou	3	2	8	14	4	2738	11357	-7,4
Vyškov	7	1	7	32	9,4	2517	21341	0,5
Znojmo	16	10	11	30	15	6798	33805	-0,8
Židlochovice	2	1	2	6	6,8	923	3659	11,7
Hranice	8	7	10	20	10,1	1847	18651	-3,8
Jeseník	7	1	9	32	14,9	3444	11579	-7
Konice	1	3	3	5	11,5	675	20805	-5,9
Lipník nad Bečvou	5	4	3	24	13,4	1084	8191	-7,3
Litovel	3	13	12	15	9,4	1140	9898	0,9
Mohelnice	6	7	4	25	10,8	1047	9385	-2,9
Olomouc	40	18	64	195	9,7	8292	99489	2,3
Prostějov	25	3	25	107	9,9	5169	44234	-0,6
Přerov	17	15	22	76	12,3	5415	44538	-4,9
Šternberk	3	3	13	46	12,2	1537	13507	-3,4
Šumperk	13	2	11	54	12,8	4934	26806	-3,1
Uničov	6	7	6	31	12,7	1501	11628	-4,4
Zábřeh	7	5	7	43	12	2034	13789	-4,2
Bystřice pod Hostýnem	3	4	7	14	11,6	929	8393	-2,5
Holešov	4	6	8	22	9,2	1022	11726	0,6

Kroměříž	15	12	9	52	11,3	4230	28921	-1
Luhačovice	2	4	7	8	8,1	816	5112	-6,3
Otrokovice	5	2	6	79	7,5	1448	18230	-1,9
Rožnov pod Radhoštěm	5	4	7	30	10,9	1999	16672	-0,3
Uherské Hradiště	13	7	24	40	9,1	4243	25266	-1,2
Uherský Brod	7	3	5	14	9,4	2498	16720	-4,9
Valašské Klobouky	5	2	8	19	13,6	1534	5039	-2,8
Valašské Meziříčí	12	10	9	62	9,8	2114	22733	-2,8
Vizovice	3	1	7	10	8	691	4698	1,7
Vsetín	9	4	12	56	11,2	3970	26668	-2,7
Zlín	20	17	43	102	7,2	3924	75278	-2

Municipality with EP	Net migration	Small businesses	Medium businesses	Large businesses	Companies in knowledge intensive services	Subsidies	Projects	Tourists services
Blansko	3,3	5023	46	7	1902	36353426	11	227
Boskovice	1,4	4461	51	10	724	30801889	13	158
Brno	-3,3	49784	575	125	60702	7,31E+08	107	5288
Břeclav	-0,9	7876	44	7	1835	12186422	21	304
Bučovice	1,6	1567	12	0	352	28864407	8	64
Hodonín	-0,8	5453	60	17	1699	16913296	20	255
Hustopeče	1	3630	32	5	472	6477430	15	89
Ivančice	-0,3	2449	12	2	554	923378	6	84

Kuřim	6,2	2337	19	3	804	8439230	11	84
Kyjov	0,6	4965	53	5	890	26266770	11	106
Mikulov	2,9	2075	13	3	504	1544631	6	187
Moravský Krumlov	2	2010	15	1	343	23991466	8	49
Pohořelice	10,2	1185	10	3	229	6879605	13	56
Rosice	7,8	2403	19	2	434	10670655	4	66
Slavkov u Brna	7,8	2273	12	3	1066	12907347	8	75
Šlapanice	11,2	7297	42	11	579	5647045	15	48
Tišnov	7	3121	22	2	690	17129711	15	84
Veselí nad Moravou	-5,4	3440	41	3	677	9208592	10	125
Vyškov	0,5	4992	47	13	1588	5360777	3	237
Znojmo	-0,5	8034	82	7	2839	29781528	14	675
Židlochovice	8,7	3391	20	2	260	13420244	12	43
Hranice	-2,3	7065	33	6	1310	53826603	17	214
Jeseník	-5,3	9891	31	4	998	19861856	16	316
Konice	-3,1	2145	8	0	159	4332960	3	34
Lipník nad Bečvou	-5,5	3215	10	0	510	11638285	8	99
Litovel	2,3	4473	21	6	536	93428304	9	116
Mohelnice	-1,5	3173	17	3	484	17992891	9	80
Olomouc	0,7	40300	170	32	10939	2,73E+08	56	1462
Prostějov	0,6	20924	87	13	3457	46687250	24	532
Přerov	-2,5	16041	82	6	3203	51448128	21	523

Šternberk	-2,7	4410	15	4	856	36639903	20	142
Šumperk	-1,6	15089	61	9	2034	36358168	20	380
Uničov	-3,8	4032	19	5	598	38594166	12	116
Zábřeh	-2,4	5715	25	4	855	510800	7	163
Bystřice pod Hostýnem	-1,6	3639	10	1	565	37838404	6	142
Holešov	2,7	4488	21	1	746	7785472	6	132
Kroměříž	-1	14573	72	11	2549	43596257	16	342
Luhačovice	-4,6	4741	19	2	437	45075485	10	207
Otrokovice	-0,3	7584	51	9	1255	40927133	15	192
Rožnov pod Radhoštěm	0,2	8070	24	5	1308	15509233	20	243
Uherské Hradiště	-0,1	20043	83	18	2257	67427740	25	318
Uherský Brod	-2,9	11809	44	7	1021	35899695	21	207
Valašské Klobouky	-0,4	5312	15	1	307	19673251	13	67
Valašské Meziříčí	-3,3	9173	48	5	1357	47570883	16	263
Vizovice	0,5	4556	29	2	327	17094146	6	57
Vsetín	-2	14202	5	17	1932	85754046	21	281
Zlín	-0,7	29505	131	22	8300	42137160	18	1102

Source: CSU 2013, RIS 2014, Google Maps 2015, Česká televize 2015