

THE REGIONAL RELATIONSHIP BETWEEN QUALITY OF BUSINESS AND SOCIAL ENVIRONMENT: HARMONY OR DISHARMONY?

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Introduction

The relationship between the economic and social development, including its political consequences, is undoubtedly one of the most important matters to be examined by social science studies. The concept of economic development is, however, often confused with a different concept of economic growth. While the economic growth is an increase in production of goods and services, the economic development, together with social development, represents a multidimensional integral part of the broader concept of the civilization development whose main purpose is the overall improvement of the quality of human life [17]. Interactions between the economic and social development are, however, significantly rendered more complicated because the links between cause and the subsequent consequence thereof within the main components of human society development, vary by virtue of an emerging retro-action [20]. In general, the economic growth represents the basic condition to reach a higher quality of life in a long term. The main aim of this paper is to present results of a research, a spatial dimension of the relationship between business and social environment in terms of its quality. This relationship assessment results from a research based on implementation of the original methodology constructed in order to evaluate interactions between the quality of business environment (BEQ) and the quality of social environment (SEQ) while focusing on sustainable development. The BEQ component

represents the aggregate result of the long-term influence of various territorially bound factors determining (while interacting with the SEQ) initial conditions of the economic development of individual regions [21] and SEQ component is considered to be the aggregate result of various territorially bound factors forming (in interaction with the BEQ) the basic conditions for the social development of regions.

1. Research Methodology

In light of the aforementioned, the concept of the assessment of the quality of life, which emerged (especially in Anglo-Saxon literature) in the second half of the 20th century, must be designated as inspiring: the quality-of-life concept is generally considered the connection of economic and social development. Three basic approaches to the quality of life evaluation have been consecutively developed. The first of them can be considered normative. The core of this sociological approach is the application of the so-called objective social indicators (objective well-being embodying idealized notions of a desired social development). The second approach, which defines the quality of life as the level of satisfaction arising from the consumer preferences of the inhabitants, could be considered economical. This course emphasizes competitiveness to some degree, because services and products that meet the consumers' preferences the most, are obviously best suited for competition. On the other hand, it is important to point out that this course is vehemently reductionist because the quality of life is undoubtedly strongly influenced

by factors outside of the economic realm (e.g. demographic factors, interpersonal relationships or civil liberties). This last approach can be considered psychological for it defines the quality of life arising out of subjective attitudes and the thinking of the inhabitants which stem from their own general level of contentment and it takes into consideration the possible emergence of both pleasant and unpleasant factors that can influence their quality of life (e.g. their subjective well-being). These attitudes and ideas might not naturally correspond with the objective social and economic indicators. In general, it is important to point out that, at the present time, there is no universal agreement when it comes to the definition of, nor a methodology for the assessment of a quality of life evaluation.

A great many authors have contributed to the conception of the quality of life, e.g. Diener, Findlay, Morris, Rogerson, Smith, Veenhoven, Andráško and Ira [1], [4], [7], [12], [14], [16], [19]. Out of the large collection of essays focusing on the quality of life evaluation, the most popular are as follows: Human Development Index (HDI), published annually since 1990 by the UNDP; the Economist Intelligence Unit's Index and Mercer's quality of life report (combining research on the subjective contentment of the inhabitants with some objective determinants for the quality of life, e.g. safety and social infrastructure); also ladders pertaining to the quality of life as created by cities or metropolitan areas whose propagator is the well-known Fortune magazine. Notable institutions that concern themselves with the quality of life evaluation are the OECD (Better life initiative), The European Union (Eurobarometer), The World Bank (World development indicators) and The World Resources Institute (World resources). Some notable Czech authors are namely Kreidl, Nováček and Mederly, who have all participated in the creation of the Quality of Life Index as an alternative to HDI (the Index is based on approx. 100 indicators covering various spheres of human development at the national level). The latter two authors have also examined the quality of life at the regional level for the Center of Social and Economic Strategies of the Charles University [11]. The problem has also been examined with regard to the so-called factor-ecology by for example Matějů [10], Vystoupil [24], Toušek

[18], Kladivo [8] and Živělová [29]. It is also important to mention Wokoun who, together with his team (Damborský, Kouřilová, Krejčová et al.), lead a number of annual MasterCard surveys. The aim of those surveys was among other things, the evaluation of the economic and social state of towns and regions within the Czech Republic. For example, a part of the survey was the evaluation of the social state of the 63 most important Czech and Moravian cities based on 12 indicators covering 5 spheres – the job market, the cost of accommodation, the quality of social and medical services, the crime rate and the level of the inhabitants' income [26]. In another year of the survey, the socio-economic level of regions were compared by means of evaluating the number of interventions on the part of the public sector, the existence of economic stability as a key prerequisite for business development, together with the financial flows and the presence of demand stimuli in business. The existing level of the knowledge-based society and the subsequent quality of life of its inhabitants as well as the attractiveness of certain regions were also analysed [25]. While the previous years of the survey predominantly focused on some specific values relating to the indicators, that from the past year analyses the development of some specifically chosen and available socio-economic indicators [27]. According to the findings, it is possible to maintain that the quality of life in less developed regions of the Czech Republic has been increasing faster than in the more developed areas.

The ever-increasing popularity of the quality of life evaluation is significantly linked to the long-debated dominant role of the GDP as the main indicator of the social development as a whole. One of the main reasons for this are, undoubtedly, the problems relating to the application of such with respect to the development of the GDP, in order to predict the long-term future development of individual countries. This often harmful practice, has resulted in a number of initiatives emerging out of the concept of pure economic welfare – Net Economic Welfare (proposing such a change in the GDP estimation that would only reflect forces that increase the economic welfare per se, i.e. other forces such as damage to the environment would lower the value) which is in

particular worth noting. Another notable initiative is the UN initiative aimed at supplementing the flow variable of the GDP with a state variable which would measure the general wealth of nations (revealing more general factors for the future development). Another reason is the actual reduction of the social development in general to its economic component only (an often cited example of the willingness to use a more complex representation of social development is the so-called Gross National Happiness Index used in Bhutan). The aforementioned activities can undoubtedly be seen as a significant contribution to the process of creating the necessary prerequisites for a more effective application of sustainable development, which is generally defined as a type of development which satisfies the needs of the present generations without damaging the opportunities for the satisfaction of needs for future generations [3].

The primary concept of our survey is based on a multi-dimensional normative approach encompassing social, economic and other (mainly environmental) indicators. These indicators are primarily oriented towards the evaluation of the social and economic quality of the regional environment from the viewpoint of the individual participants in the regional development (citizens, entrepreneurs, public service) – who can be characterized as exogenous. In the process of choosing possible indicators, much attention has been paid to the key spheres of evaluation which were identified by means of analysing previous surveys as well as defined by relevant available indicators. An important interconnecting element between the socio and economic evaluation is the regional ability to compete, which can be defined as the ability of regions to generate relatively high income and employment rates when confronted with outside competition [5]. From the long-term point of view, while interpreting this definition we find that the basis of competitiveness is the degree of the level of attractiveness for regional business opportunities and residential purposes. This can hypothetically mean that regional competitiveness is influenced not only by the BEQ but also by the SEQ. The long-term sustainability of competitiveness is then contingent upon the degree of harmony between both components. Such a hypothesis is supported by recent studies in the field of regional

competitiveness according to which the level of competitiveness of a region is determined by a specific optimal combination between universal and region-specific factors. These combined factors influence the given region on a long-term basis, as has been demonstrated by for example the work of Wokoun et al. [28]. From the philosophical point of view, it actually answers one of the basic existentialist questions – the question relating to where and how to live. Supporting the SEQ (management of favourable dynamic relations between the BEQ and SEQ) should therefore be adequately reflected in the economic policies as well as in the development strategies of individual regions.

2. The Principal Results of the Survey

The main administrative units chosen for the regional evaluation of the BEQ and SEQ in the Czech Republic were the micro-regions of municipal body with extended competence (MEC). MEC, those regions falling under the jurisdiction of a third level There are 205 units altogether + Prague, which can be matched to nodal regions which were established based on relations between the centre and its premises [6]. The meso-regional level then consists of 14 NUTS-3 regions (regions). This level in the Czech Republic (together with 8 statistical NUTS-2 regions created for the implementation of the EU's cohesion policy) represents the main framework for regional policies in the Czech Republic. The actual method for evaluation is based on a comparison between some chosen indicators (factors) which can be predominantly characterized as state variables. The total values of BEQ and SEQ at the MEC level represent the sum of some values of individual factors obtained by the following procedure: ranking regions in accordance with primary indicators included in the individual factors with the use of statistical groups established by analysis of distribution, the final ranking of regions in accordance with the given factor based on the aggregation of results obtained within the first step and the subsequent transformation of the results of partial evaluations provided within the second step into generalized categories used for final evaluation (from 1 – the best, to 5 – the worst). Regional values were then obtained by

aggregating the calculated micro-regional weighted values with regards to the numbers of inhabitants. We believe that the fundamental result of the survey was the evaluation of the mutual relations between BEQ and SEQ which may help to construct relevant practical implementations.

2.1 The BEQ Component

The regionally oriented evaluation of the business environment is based on region-specific factors that reflect the development (investment) preferences of companies that are active in the processing industry and the higher level of market services (in economically developed countries, these levels have a decisive influence on the cumulative economic output). Altogether, 16 significant factors have been identified (described in detail in Tab.1) which may be divided into 6 categories. Information required for the correct choice of factors as well as the estimation of their weights of significance were obtained from international surveys by significant, mainly foreign, investors and a number of consecutive statistical and other analyses which focused on the Czech Republic ([9], [13], [23], [28] + others, esp. those available on www.bakbasel.ch). In this context, more than 20 thousand primary resources were collected within the period from 2006–2008 (periodically in 2009, and exceptionally even in 2010). In accordance with the main strategic aim of the development of the Czech economy, which was the gradual transition to a knowledge-based economy, weights of significance values were assigned to some chosen factors. These values were set in accordance with the anticipated conditions of economic development pulled-out by innovations. This approach employed thus increases the timeless significance of the BEQ evaluation.

The regional evaluation of BEQ provides the business sector as well as the public service sector with information concerning some elementary prerequisites of individual regions for the development of business activities (as activated namely by virtue of new or additional investments) and for potential

external reserve savings. The main advantage of the applied method of BEQ evaluation, in comparison to the (in specialized literature) predominating method of regional economic output evaluation based on disaggregation of general macroeconomic indicators (significantly limited by low accessibility of this data at a lower than meso-regional level), is its higher explanatory power, especially from the long-term point of view. This in turn enhances direct links to the identification and formulation of programme aims for regional policies.

The results of the evaluation carried out in the MEC regions indicate that the regions of all centres possess a higher-than-average BEQ, i.e. their aggregate values are lower than 2.5. This value is considered to be the basic criterion for a definition of development poles at national level (the most important criterion is the system performance of higher management positions). The approach applied dismisses the vagueness surrounding the significance of a development pole definition which is characteristic for theories of polarized development. Development poles that have their BEQ value lower than 1.5 and that have a high significance even from the international point of view, are thus considered poles of supra-national significance – in our case it is Prague (considered to be one of the main poles of supra-national significance) and Brno (considered as a secondary pole of supra-national significance which manifests itself in specific fields only – in the given case in the fields of science, research and exposition business). Eight additional MEC regions bear higher-than-average values of BEQ. These, however, do not possess higher public management functions. These regions are situated almost solely in Central Bohemia and together with Prague they constitute a metropolitan region of European significance. Regions of concerned development centres, i.e. MECs (apart from Mladá Boleslav which is considered to be a pole of supra-national significance because of its exceptional economic value) are categorized amongst the second group and possess a highly favourable BEQ value.

Tab. 1: Business Environment Quality Factors – part 1

Factor	Definition	Main Indicators
Business Factors		
Proximity to markets	Regional information concerning the accessibility of foreign and domestic markets evaluated by regional GDP in PPP per capita (application of gravity model within the limits of the so-called effective distance).	Aggregation of road distances in accordance with chosen groups of base and target regional centres (related, in case of domestic markets, to the average distance between regional centres) – data from 2009.
Concentration of Significant Businesses	Regional information about the presence of large companies with a significant role within the regional division of labour (companies in excess of annual revenue of 50 thousand Euros).	Localization of large businesses – verified data from 2006.
Support Services	Regional information about the presence of companies providing production services (companies in sections L, M and N in the NACE system).	Number of companies providing support services per 1000 economically active inhabitants – data from 2008.
Presence of Foreign Businesses	Regional information concerning the presence of foreign companies encouraging the Czech republic's involvement in the global economy.	The share of foreign businesses in the sum total of all economic subjects (apart from governmental organisations, non-governmental organisations and Individual entrepreneurs) – data from 2008.
Work Factors		
Labour Force accessibility	Regional information surrounding the overall supply of the labour force	Number of economically active inhabitants – interpolated data from 2006.
Labour Force Quality	Regional information about the general level of industrial worker education (both manual and non-manual components) and of the tertiary sphere workers (non-manual component).	Percentage of people of more than 15 years of age with an elementary education who have successfully graduated from at least one of the following educational institutions: high schools/apprentice training centres, college/university; Percentage of people of more than 15 years of age and tertiary education who have successfully graduated from at least one of the following educational institutions: university – data from 2001 population census updated by data from 2006.
Labour Force Flexibility	Regional information surrounding the entrepreneurship of inhabitants (qualitatively the highest level of flexibility).	Number of individual entrepreneurs–per 1000 inhabitants over 15 years of age – data from 2006.
Infrastructural Factors		
The quality of Roads and Railways	Regional information on MECs' connection to selected categories of roads (highways/motorways/1st class roads) and railways (apart from the category of secondary railroads that do not connect MECs).	Position on MECs within individual categories of roads and railroads (evaluated by their technical and operational characteristics) – data from 2009.

Tab. 1: Business Environment Quality Factors – part 2

Factor	Definition	Main Indicators
Infrastructural Factors		
Information and Communication Technology	Regional information concerning the average inhabitants' ICT equipment (including dynamic changes).	Percentage of homes equipped with PCs – data from 2006 (with interpolation of data from the Czech Statistics Bureau).
Proximity to International Airports	Regional information dealing with the location and accessibility of international airports.	Accessibility of international airports within given limits of maximum distance – data from 2009.
Local Factors		
Entrepreneur and Knowledge base	Regional information on industrial zones, scientific-technological parks, business incubators, universities, colleges and high schools and research centres distribution.	Number and quality of entrepreneurial facilities including R&D and basic knowledge infrastructure (evaluated by chosen criteria of significance) – data from 2009/2010.
Assistance of Public Administration	Regional information about the quality of public regional administration in terms of its potential for support of entrepreneurial activities.	Chosen data from the „City for business“ project – data from 2009.
Price Factors		
Labour Costs	Regional information concerning the level of salaries in selected sectors of the economy.	Average gross wages in industry and market services – data from 2005.
Price of Real-estate	Regional information about the average housing prices and rents for office structures.	Average real estate prices in industrial zones and the average annual rent costs – data from 2009.
Environmental Factors		
Urban and Nature Attractiveness	Regional information concerning the attractiveness of regions evaluated with respect to their significance for tourism.	Appearance of unique elements of natural and human origin (protected areas of nature and architectural monuments) – data from 2007.
Quality of the Environment	Regional information about negative impacts of economic development on the environment.	Aggregated indicator of emission limits adherence (chosen pollutants) – data from 2004–2006.

Source: original calculations, CSB, CHMI, Factum Invenio.

The remaining regions have been classified into groups with a favourable (101 regions), a less favourable (82) and an un-favourable (2) level of BEQ. In light of this, it can be maintained that with a decrease in the level of the BEQ, the economic development of the MEC regions is increasingly influenced by their comparative levels of individual factors. Generally speaking, a confirmation of the hypothesis of BEQ level per capita of regions represents a basic characteristic of their mutual position (and thus the political urgency of solving their development problems) and constitutes a significant outcome of the conducted research. The validity of the hypothesis has been statistically confirmed by means of an exponential regressive function which was

considered optimal mainly from the viewpoint of the larger cities with the highest potential for the accumulation of external savings reserves. The real values of BEQ can naturally significantly differ from the theoretical levels calculated by means of the exponential curve (the most significant deviations can be observed in Central Bohemia, the Plzeň region and South Bohemia; the most significant negative deviations can be observed in Moravia-Silesia and the Olomouc regions). The above mentioned results have been effectively employed for purposes of the identification of development axes of national and regional significance.

Based on the results obtained by aggregating the micro-regional values by regions (see

Tab. 2), it is possible to accept the strategically significant conclusion, that the disparities or imbalances in problems surrounding the economic development in the Czech Republic relate mainly to the relationship of Prague (or Prague together with Central Bohemia) to the remaining regions. It is important to point out, that their BEQ values are in close proximity to the range of +12 to -10 % approximately the average for these regions (counting Prague, the level is within the range of +20 to -58 %). In this context, some of the differences in BEQ values between development poles that have a decisive influence on the overall investment attractiveness of concerned regions can be considered the most significant. Other analyses

seem to suggest, that a convergence tendency in the economic output of regions has not yet been shown to exist. The fact that the hypothesis suggesting that the BEQ is strongly connected to the GDP value (as a primary indicator of development differentiation among social systems) has been confirmed at the regional level and may be considered crucial. The average correlative coefficient discovered within the evaluated period from 2006–2008 is 0.97. A logical and dynamic connection between the business environment and its success has also been statistically substantiated. The aforementioned proves that the original BEQ evaluation model has a very high factual value, which makes it an extremely effective tool for regional politics.

Tab. 2: Overall BEQ Values in Regions

Region	BEQ	BEQ centres	GDP per capita in thousands CZK(2007)
Prague	1.16	x	760
Central Bohemia	2.65	2.03	331
South Bohemia	2.86	1.98	307
Plzeň	2.77	1.68	329
Carlsbad	2.90	2.19	263
Ústí nad Labem	3.05	2.35	286
Liberec	2.79	2.02	274
Hradec Králové	2.86	1.88	302
Pardubice	2.94	1.81	297
Vysočina	3.02	2.16	298
South Moravia	2.78	1.54	325
Olomouc	3.19	2.37	262
Zlín	3.29	2.43	288
Moravia-Silesia	3.27	2.33	297
Czech republic	2.74	1.16	354

Note: In the case of Central Bohemia region, the BEQ centres value is related to the Mladá Boleslav region.

Source: original research, CSB.

The following and most significant regularities or tendencies have been found in the composition of aggregate BEQ levels:

- Meso-regional level – a decrease in micro-regional BEQ levels with increasing distance from the regional centres which is in direct accordance with the core-periphery group theories (selectively

modified by the historical development of the urbanization process);

- macro-regional and meso-regional level – creation of spatial systems of development poles and development axes of national and regional significance (identified by positive deviations of the real from the theoretical BEQ values) representing some

- primary sources of positive economic effects spreading from development poles;
- macro-regional level – a decrease in the regional BEQ values when approaching the east (corresponding to a similar trend of decreasing meso-regional GDP per capita values when getting away from the EU core, which can be observed in all countries of the so-called Visegrád Group: Czech Republic, Slovakia, Poland, Hungaria).

We consider the above described regularities and tendencies to be the specific result of laws of development and hierarchal differentiation between social systems that have created a basic spatial framework for the economy. The most significant result of their influence is the spatial differentiation in accordance with both the BEQ and GDP values which determines its optimal functional use [21], [22], [23] via production factors prices.

2.2 The SEQ Component

The evaluation of the SEQ is complicated in itself because of the diversity of approaches to the quality of life concept (see above). From our point of view, the application of the so-called objective social indicators appears to be the most appropriate. In that spirit, it is, however, necessary to point to the absence of universally accepted methods for selecting indicators or factors. Selecting these is therefore to a significant degree, a subjective matter

reflecting not only the specialized knowledge and preferences of the researcher but also the accessibility of relevant indicators. A problem which is commonly discussed is related to weights of selected factors. Here we believe that their introduction to the research would not be justifiable because the “ideal” social development should reflect the preferences of all groups of inhabitants without favouring some over others (for example: employment rates are only significant to people during the span of their employment age). Another reason is the absence of universally accepted indicators comparable to the GDP. Introducing indicator weights would also increase the risk of inadvertently altering the evaluation results – for example we can cite some American research [2] where indicator weights were applied. As a result of this, some 20 % of evaluated metropolitan areas in the USA were placed into the best or the worst category. After undertaking some analyses, the equal number of factors has been implemented for the SEQ evaluation as for the BEQ evaluation (the fresh air quality is unlike its BEQ evaluation counterpart oriented towards a more long-term evaluation of the most significant ever-present pollutant – airborne dust). The fact that the vast majority of them have already undergone a thorough statistical analysis is also important [10]. These undifferentiated factors have been placed into five elementary groups (see Tab. 3).

Tab. 3: SEQ Factors – part 1

Factor	Definition	Main Indicators
Social Factors		
Life Expectancy	Regional information on life expectancy (reflecting the quality of health care, social services and the environment).	Life expectancy of a new-born child – data from 2006–2010.
Education	Regional information concerning the overall level of education.	Educational index: graduates of Apprentice Training Centres of both types ($k = 1.3$) + graduates of colleges ($k = 1.55$) + graduates of universities ($k = 2.25$) / inhabitants of more than 15 years of age – data from 2011 population census. ¹
Unemployment	Regional information regarding the unemployment rate (indication of imbalances in the labour market).	Average rate of registered unemployed – data from 2006–2010.

Tab. 3: SEQ Factors – part 2

Factor	Definition	Main Indicators
Social Factors		
Divorce rate	Regional information on divorce rates.	The divorce-marriage ratio – data from 2006–2010.
Miscarriage rate	Regional information on the rate of miscarriages and abortions.	The miscarriage of new-born babies ratio – data from 2006–2010.
Crime rate	Regional information on crime rates.	Number of reported crimes per 1000 inhabitants – data from 2006–2010 (original interpolation of data from the CSB and PCR).
Demographic Factors		
Natural population changes	Regional information on the effects of natural population reproduction.	Natural increase/decrease per 1000 inhabitants (middle class) – data from 2006–2010.
Migration	Regional information on the effects of migration.	Migratory increase/decrease per 1000 inhabitants (middle class) data from 2006–2010.
Population Age	Regional information on the age structure of the population (perception of productive group development).	Age Index (percentage of 65+ and 14- years of age) – data from 2006–2010.
Urban Related Factors		
Urbanization	Regional information on the level of urbanization (minimum population level of the cities – 3 thousand).	Percentage of cities related to the entire population – data from 2011 population census.
Urban development	Regional information on the intensity of residential construction.	Percentage of new buildings in the overall number of inhabited buildings – data from the time period between the 2001 and 2011 population census.
Urban environment (genius loci)	Regional information on the architectural uniqueness of mansions (hierarchal line: UNESCO monuments, city monument reservations, supra-national significant spas, national cultural heritage).	Appearance of protected monuments and spas with special consideration for the specific position of Prague (localization outside of MECs has been accounted by means of meso-sections) – up-to-date information.
Infrastructural Factors		
Healthcare infrastructure	Regional information on the healthcare provided.	Number of MDs per 1000 inhabitants – data from 2010. ¹
Social Infrastructure	Regional information on social security provided.	Capacity of social service institutions per 1000 inhabitants – data from 2010. ²
Environmental Factors		
Landscape	Regional information on the presence of landscape elements that result in a positive psycho-somatic effect on people.	Percentage of forested areas and water within in the entire territory – up-to-date information.
Quality of fresh air	Regional information on atmospheric pollution by airborne dust as an ever-present pollutant with the most serious consequences for the health of the population (including synergistic effects).	Average annual concentration of PM ₁₀ (borderline values at 10, 20, 30 a 40 µg/m ³ = health-protective emissions limit) – data from 2006–2010 (original and interpolated data).

¹ Coefficients (k) have been determined by the application of the average salary median.

² Without specialized healthcare institutions.

³ Without housing for the physically impaired.

Source: CSB, MLSA, HSII, MCCR, CHMI, PCR, original calculations.

The SEQ evaluation provides the business sphere, public service sphere and other potential users with regionally and factually structured information about some relevant issues influencing the quality of life in the Czech Republic. These factors have a considerable impact not only on the social environment but also on the long-term sustainability of the current model of economic development (a long-term decrease in the quality of life caused by for example by an increase in environmental damage or by a significant increase in the crime rate undoubtedly supports the increase of “non-productive” financial output on the part of the public as well as the private sector).

Based on the aforementioned set of indicators, the first to have their SEQ evaluated were the MEC regions. It is possible to divide these regions according to the overall quality of life into categories of: progressive (regions with a high, above-average SEQ level, i.e. lower than 2.5 – because of other advantages such as for example the level of cultural activities possible, whereby even county seat regions with an SEQ slightly higher than the aforementioned cap have been placed into this category), standard (regions with average SEQ) and regressive (regions with strongly below-average SEQ, i.e. higher than 3.5). The results indicate that when compared to the BEQ, the SEQ's characteristic in terms of regional layout is at a visibly lower level of differentiation (both extreme classification groups are not represented and approx. 3/4 of regions, i.e. approximately 50 % or more regions fall into the average group unlike the comparison of the BEQ). Another significant difference is the fact, that not all poles of development have an above – average SEQ – exceptions to this are the K. Vary, Ústí n. L. and Ostrava regions, which as development poles of the structurally most affected regions possess only an average SEQ. This can be interpreted as the empirical confirmation of Myrdal's theory of circular cumulative causality [12]. Apart from most development poles (the best SEQ is, however, not in Prague but in České Budějovice and Pardubice), another eight regions have a higher-than-average SEQ. These regions are situated in Central Bohemia and South Moravia (hinterlands of Prague and Brno) and in Pardubice, Vysočina and South Bohemia regions. Other regions have then been placed

into average (156 regions) or below-average (31 regions) groups. More detailed information as to their territorial distribution is provided by Fig. 1. Average SEQ values in accordance with statistically optimized size groups of regions with border values of 180, 90, 45 and 18 thousand inhabitants are 2.78; 2.87; 3.03; 3.12 and 3.19 respectively – and are therefore in a much narrower sector than in the case of the BEQ with the corresponding values of 1.68; 2.51; 2.97; 3.51 and 3.84. The dependency of SEQ on the population of MEC regions is much lower than in the case of BEQ and also has different characteristics that can best be described as a linear regressive function. From the development point of view, factors determining strengths and weaknesses of regional SEQ are the most important. Within the size group 1 (regions of the largest cities, i.e. Prague, Brno, Plzeň and Ostrava) their strengths are factors of urbanization, healthcare infrastructure, life expectancy and education. Their weaknesses are mainly crime rates, the average age of the population, the landscape structures and the quality of fresh air. The size group 2 (18 regions altogether) has very similar features. This group's only difference from the previous one are two more factors among the strengths – the unemployment rate and urban development (this difference is, however, dependent on a specific territorial definition of the most important urban regions as well as on the inclusion of Ostrava into the first group). The following two size groups have a higher degree of heterogeneity than the first two groups. Within the scope of the group 3 (47 regions) the strengths were thus identified only as education and healthcare infrastructure factors. The weaknesses were crime rates. In the largest group 4 (101 regions), the only significant factor was the urban environment which represented the weaknesses of these regions. In the group 5 (36 regions), there is a repeated increase of homogeneity where the strengths of these regions is (somewhat surprisingly) the unemployment rate and the quality of fresh air. The weaknesses are logically then all urbanization factors as well as education, healthcare and social infrastructures. The aforementioned suggests, that at the level of the MEC regions, the least significant differentiation aspect results from the divorce rate, the rate of miscarriage and factors

surrounding natural population changes and migration. The development differentiation of these factors is thus determined by processes at higher hierarchal levels (e.g. general changes of popular lifestyle or liberalization of concerned national legislature). In this context, within the scope of defined groups, 56 regions possessing favourable levels of basic demographic factors were identified; these factors have a significant influence on the development perspectives of the identified regions (marked in Figure 1 as regions with demographic advantage).

The second step involved the aggregations of micro-regional SEQ levels according to regions (see Tab.4). These aggregations show, that the evaluated regional SEQ values stay within the range of +18 to -15 % (or from +15 to -12 % without Prague) in relation to weighted average concerned. In two structurally affected regions, the SEQ of the regional centre is even worse than the aggregated value of the whole region – it serves as an apparent evidence of serious degradation to the social environment there. In the case of the interaction at the

regional SEQ and BEQ values, no definite statistical dependence (correlation coefficient 0.56) has been demonstrated. In the case of the SEQ to GDP relationship, only weak dependence was ascertained (it is important to point out, that the GDP does not take into account any values originating outside the economics realm. e.g. landscape structure). The general origins of this arise from the individual differences in the long-term dynamics of social and economic reproduction processes, namely the gradual prolonging of reproduction cycles (population regeneration) on the one hand and the gradual shortening of re-production cycles (regeneration of products and technologies) on the other. This in turn has a substantial influence on the development of the social and business environment as well as on the mutual interaction between the two. A specific cause is the contradictory influence of a number of factors in the case of SEQ that can best be demonstrated by the example of a group of environmental (the best values are from rural regions) and a group of urban factors (the best values are from urban regions).

Tab. 4: Overall SEQ Values of Regions

Region	SEQ	SEQ centres	Population in thousands (census 2011)
Prague	2.50	x	1,273
Central Bohemia	2.90	2.44	1,275
South Bohemia	2.64	2.31	637
Plzeň	2.91	2.56	575
Karlovy Vary	3.31	3.38	310
Ústí nad Labem	3.47	3.09	830
Liberec	2.93	2.53	439
Hradec Králové	2.87	2.56	556
Pardubice	2.74	2.31	518
Vysočina	2.73	2.44	513
South Moravia	2.93	2.56	1,170
Olomouc	3.03	2.50	640
Zlín	2.89	2.50	590
Moravia-Silesia	3.40	3.50	1,236
Czech Republic	2.95	2.50	10,562

Note: In the case of Central Bohemia region, the SEQ value is related to Mladá Boleslav.

Source: original research, CSB.

The following regularities or tendencies were found in the territorial distribution of SEQ values:

- meso-regional level – a tendency to decrease the micro-regional SEQ values when reaching the outskirts regions is predominant (selectively modified by their current social development and the development of concerned regional centres);
- macro-regional level – no clearly dominant tendency as in the case of the BEQ has been identified. This level is, however, closely connected to the significant negative anomalies of the SEQ (induced by the excessive preference of strategically significant branches such as mining industry, energy and heavy industry during the period of the centrally-planned economy).

The aforementioned data confirm the basic significance of lower hierarchical levels in the process of creating the social environment as well as the considerable persistence of negative regional development trends introduced during more recent times. From the viewpoint of the overall social development, it is necessary to point out the economically often overlooked fact which is that the SEQ influences the long-term competitiveness of individual countries and their regions in a significant way. This logical conclusion corresponds to the fact that regions with a lower-than-average level of SEQ have suffered stagnation or loss of population (the highest decrease in population (2.5 %) was discovered in Moravia-Silesia – the overall data for the Czech Republic show a 3.2% increase) during the period of 2001 to 2011. This was connected to a higher-than-average migration concentrated namely within the younger and higher educated groups, which logically leads to a lower level of the future competitiveness of these regions.

2.3 Mutual Connection of BEQ and SEQ

In the final part, a lot of attention was paid to regional analyses of the relations between the BEQ and SEQ levels and their synthesis from the viewpoint of the achieved level of their equilibrium and from the viewpoint of some idealized notions of their harmony. A balanced development is generally regarded as a development that does not disrupt the balance between its economic and social

components. If we paraphrase the ancient ideal surrounding harmony, and that is that human society should endeavour to achieve not only economic progress (welfare) but also ensure the physical and psychological health of the people (contentment) and satisfaction of their natural need of beauty (happiness). From the political point of view, it is thus essential to point out, that supporting harmonic development was referred to in the Treaty of Rome from 1992. When fulfilling this aim, the regional level plays an important role. The majority of economic, social and territorial cohesion policies are aimed at this level.

In the first part, an analysis of the MEC regions positions in terms of BEQ and SEQ was carried out. The main result of this was their division into three types in accordance with the level of balance in their various positions, which were measured by means of the SEQ to BEQ ratio (in accordance with their statistical layout, the borderline average values were set at 0.9 and 1.2; the related average values in the MEC regions being 3.3 and 3.1). In order to ensure the best possible interpretations of the results, four specific sub-types have been established. Altogether, the following types and sub-types have been defined (for more detailed info, see Figure 1):

- Type A: business-like regions characterized by visibly higher levels of BEQ than SEQ with specific sub-type A-, encompassing regions with lower-than-average SEQ (aggregate values of 3.2 and higher);
- Type B: all-round regions characterized by a balance between BEQ and SEQ, with the specific subtype B+ encompassing regions with higher-than-average BEQ and SEQ (aggregate values lower than 3.1 or 2.9) and B- encompassing regions with lower-than-average BEQ and SEQ (aggregate values higher than 3.5 or 3.2);
- Type C: socially more highly developed regions, characterized by a significantly higher SEQ than BEQ with the specific subtype C- encompassing regions with lower-than-average BEQ (aggregate values of 3.5 and higher).

There are 19 regions under Type A, i.e. 9 % of all regions but only a third of the Czech population.

This type encompasses 10 poles of development, that are supplemented by 9 subordinate

regions situated mainly in the Ústí nad Labem region and Central Bohemia (if we consider the specific nature of the urban regions of Prague, Brno, Plzeň and Ostrava in terms of their enlargement of adjacent MEC regions, it would significantly concern only the Plzeň region, whose aggregate values would become close to the borderline between types A and B). All subordinate regions apart from Kolín are then connected to the development poles regions in Ostrava and K. Vary by virtue of their categorization into the specific subtype A- with an unfavourable SEQ value. This is especially typical for former mining and industrial regions with lower-than-average education, high unemployment and a damaged environment (these regions significantly influence the socio-economic development of concerned regions). The instrumental question relating to the regional categorization into types is, whether the regional imbalance between BEQ and SEQ is the result of a dynamic development or whether it is more the result of an erroneous development strategy. The answer to this question can be ascertained mainly by observing the individual regions' SEQ to determine whether or not it has a progressive tendency. This is the case in seven development poles with Prague at the forefront. Because many of them have highly negative levels with respect to some SEQ factors (for example Prague with the highest regional crime rate), it is necessary to include relevant measures aimed at improving the SEQ in their development strategies. In light of this, it is important to point out that in the World Quality of Life List by City (from 2010) from the American advisory group Mercer, Prague was placed 69th and thus was significantly lower than other West-European metropolises. The aforementioned condition has not therefore been met by A- regions. As the long-term support for their economic development (including privileging regions with high unemployment rates within the system of investment incentives) has not led to an anticipated improvement in their positions, it is crucial to make some necessary steps in order to ensure a serious change in their contemporary development strategy (this applies mainly to the structurally damaged regions of Karlovy Vary, Ústí nad Labem and Moravia-Silesia).

There are 102 B type regions (i.e. almost 50 % of all regions including the remaining

poles of development – Č. Budějovice, Jihlava, Olomouc and Zlín) with approx. 47 % of the entire population. This type is characteristic namely for the third and second group size in the MEC regions. A quarter of them (26 regions) have been placed into the B+ subtype which is prevalent in South Bohemia and Central Bohemia. Type B- has only one more region than type B+. Most B- regions are situated in Moravia-Silesia, Ústí nad Labem and South Moravian regions. It can be assumed that balanced levels of BEQ and SEQ have a positive impact on the overall attractiveness of the regions whose significant characteristic is mainly long-term in the form of positive immigration. If we evaluate these regions from this viewpoint (while to a varying degree omitting the development-wise dominant poles whose immigration is largely influenced by suburbanization processes) this fact has been absolutely or to a lesser degree confirmed in 10 out of 13 non-Prague regions. The Plzeň and South Moravian regions have recorded comparatively better than average levels in regions of type C. This difference is due to the fact that concerned regional centres are enveloped in rural regions of the given type that were used primarily as a workforce source during the era of centrally-planned economies, and hence were able to maintain their rural nature origins. However post 1989 year, this situation has massively changed due to suburbanization processes that have been encouraging the integration of these regions into the newly-forming metropolitan regions. A somewhat different situation can be observed in the case of Ostrava's industrial agglomeration where there has been a massive disruption of social environment and the concerned MEC regions are thus displaying lower migratory activity than the other Moravia-Silesian rural Type C regions with a favourable geographic position. To complement the aforementioned information, in the case of B+ regions, a negative migration component was discovered only in two cases. From the strategic point of view, the instrumental question is the confirmation of the hypothesis of a positive influence of the balance between BEQ and SEQ on the long-term sustainability of regional development. This question obviously cannot be answered with any degree of certainty due to the permanently indeterminable nature of future

development. However, the aforementioned facts substantiate the validity of this hypothesis.

Type C encompasses 85 MEC regions, i.e. approximately 41 % of them but with only one fifth of the entire population. This type, that is not present in the strongly urbanized Ústí nad Labem region, can mainly be characteristic for the smallest size group of regions. Almost 60 % of these regions then fall into the C- subtype (the strongly integrated regions adjacent to Brno and Plzeň have not been included) which is mainly present in Moravia-Silesia as well as in Olomouc, Zlín and Southern Bohemian regions. Their overall attractiveness is strongly limited by the low level of BEQ. The matter concerning the increase of the BEQ is therefore logically the most important of all when it comes to their future development. An advantageous factor is the existence of positive migration which is evidently the case in 9 out of the 12 here evaluated regions (the remote regions of the C- type are then especially prone to emigration). A satisfactory solution to the question of the appropriate development of these regions is, however, a very difficult task due to their relatively low level of development resources. It is apparent that a relatively favourable SEQ could be used for developing accommodative functions or tourism. The first of these two options is practically applicable only in regions situated within the suburban areas of the largest cities and thus we believe the best option is the second one where 15 regions (situated mainly in the attractive Šumava and Beskydy areas) possess a significant potential in that regard. Those regions situated along the development axes which merit national or regional significance also have broad options of development [28]. Apart from regions that are adjacent to the development poles, this applies to at least a dozen other regions that are interesting for investors by virtue of their favourable land prices and the availability of labour force. Approximately 40 % of regions of the given type have at least one of the aforementioned options (by way of comparison, the positive deviations from the theoretical BEQ level proving their relatively successful development up until now has been demonstrated by approximately 1/4 of them). A successful development of the remaining regions will then be dependent on economic cooperation with stronger regions.

The other, unfavourable alternative is their economic and then even social marginalization, which could be partially dampened by specific measures oriented towards the maintenance of the current services or by providing new services within the public sector (namely schools, healthcare and social services).

Tab. 5 shows the main result of the regionally-aggregated typology. The chart shows that type A is relatively mostly present in the Ústí nad Labem region (almost all regions, however, fall into A- subtype), type B in Karlovy Vary and Central Bohemia regions and Type C in the Zlín region. According to this typology, the most heterogeneous regions are the Plzeň region and Central Bohemia – therefore it is reasonable to expect that a consensus on the matter of future development policy will be harder to achieve in these regions. If we focus on the original question posed in the title of the paper, it is clear, that at the level of the MEC regions, an imbalance is slightly more prevalent in the matter of BEQ and SEQ – according to the numbers and proportion of the Czech population, the so-called complex MEC regions of type B are roughly half. This fact is reflected in results of the regional evaluations where regions of this type, i.e. according to population, are prevalent in several regions (namely Olomouc, South Bohemia, Central Bohemia, Karlovy Vary, Vysočina, Liberec and Zlín regions). In that spirit it is useful to point out that the thereby resulting level of statistical dependence of both components only slightly exceeds 50 %. The term balance, however, is not quite equivalent to the term harmony. Harmony represents a qualitatively higher level of balance which suppresses systemic negative deviations from social standards that are derived from idealized notions of a socially desirable development. When evaluating the achieved level of harmony between business and the social environment, it is possible to apply only a relative approach, whereby these deviations are evaluated in accordance with the BEQ and SEQ factor groups. Into the group of harmonic or more precisely quasi-harmonic regions, the following regions can be placed: type B regions (apart from B- and due to serious devastation by surface coal-mining also the Chomutov and Sokolov regions), type A regions (apart from A- and Ústí n.L. and Kolín that do not meet the SEQ level requirements of

the progressive group). Altogether this makes 80 regions, i.e. 39 % of their overall number but possessing 60 % of the entire population. Based on the aforementioned facts, we can reach the general conclusion that none of the

evaluated relations of BEQ and SEQ (i.e. harmony and disharmony) can be considered dominant (from the territorial point of view, disharmony prevails but from the population point of view, harmony does).

Tab. 5: MEC Regional Typology According to the Balance between BEQ and SEQ

Region	Type A	Type B	Type C	Number of regions
Prague	1	-	-	1
Central Bohemia	4	18	4	26
South Bohemia	-	9	8	17
Plzeň	2	6	7	15
Karlovy Vary	1	5	1	7
Ústí nad Labem	6	10	-	16
Liberec	1	6	3	10
Hradec Králové	1	7	7	15
Pardubice	1	5	9	15
Vysočina	-	6	9	15
South Moravia	1	10	10	21
Olomouc	-	6	7	13
Zlín	-	4	9	13
Mora	1	10	11	22
Czech Republic	19	102	85	206

Source: original research

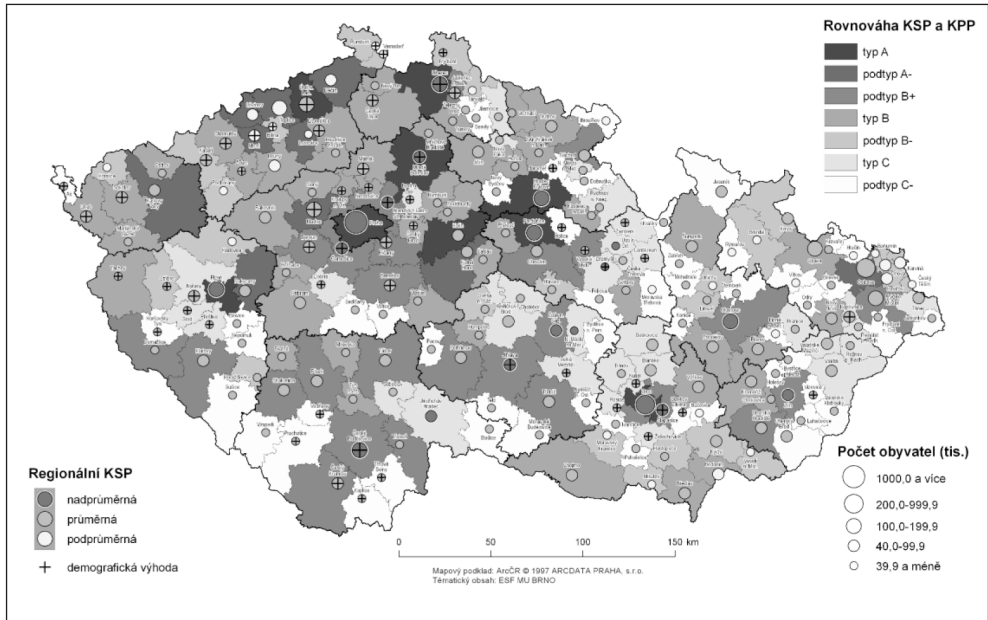
From a broader perspective it is clear, that low SEQ, generated mainly by a higher-than-average rate of socially-pathological phenomena or severely damaged environments, not only increases the expenses for both the public and private sectors, but also lowers the investment and residential attractiveness of concerned regions. Therefore, the overall BEQ and to a lesser extent even SEQ are, apart from other factors, significantly influenced by macroeconomic and global factors the future development of which are, however, hardly predictable. Logically, regions with a higher-than-average BEQ possess also the highest level of competitiveness. The BEQ links to the SEQ might not be in equilibrium in such regions. If the main characteristic for these regions is a progressive SEQ, a positive deviation in the BEQ can be regarded as positive; in our case, it is mainly regions of the following development

poles: Prague, Brno, Plzeň, Liberec, H. Králové, Pardubice and M. Boleslav. The aforementioned conclusions reflect the present hypothesis with respect to the positive influence of a balanced BEQ to SEQ relationship on the sustainability of social development in general. This equilibrium reflects the natural tendency to gradually balance both components in the long-term; that is encouraged by a more favourable development of positive (for example improvement of education levels as well as the healthcare level) rather than the negative factors (atmospheric pollution and crime rate). The existence of a consistent regional policy featuring the increase in SEQ at all hierarchal levels (in our case with a special emphasis on the structurally most affected regions of Moravia-Silesia, Ústí nad Labem and Karlovy Vary) as one of its main priorities is crucial. Other prerequisites are namely forsaking the

contemporary one-sided approaches to effectiveness of public services distribution (the so-called optimization of healthcare and education

is connected to significant impacts on the development of rural areas) and the replacement thereof with more conceptual approaches.

Fig. 1: SEQ in MEC Regions and their Typology with Respect to the Balance between SEQ and BEQ



Source: original research

Conclusion

This paper provides theoretical and practical information of significance with regard to the regional quality and mutual links between the business and social environment in some micro-regions and meso-regions of the Czech Republic. It thereby integrates regional, economic and sociological approaches into the quality of life evaluation. The results of the research indicate that economic development has not only a positive but also a negative impact on the quality of life and therefore it is not possible to agree with the relatively widespread belief that “growth solves all”. The conclusions represent a useful generalization of a complex issue that contributes to the ongoing scientific discourse (in this context it is predominantly an evaluation of the BEQ to SEQ relationship in terms of the development and hierarchal differentiation of the cultural

landscape) but also to the practical solution for basic problems connected to the effectiveness and sustainability of social development (via conceptualization of the information obtained from within regional policies in systemic connection with the optimization of strategic priorities of economic and social policies). In this context the logical question automatically arises: is equilibrium within the business and social environments (as has been suggested by this research) a fundamental prerequisite for the long-term sustainability of the social development? The answer to this question is somewhat complicated by a number of problems connected with the definition, the non-existing conceptual theory and practical application of sustainable development concept (including its relations to the also insufficiently clarified concept of regional competitiveness and the quality of life). An understanding of the aforementioned terms is also necessarily

determined by the overall value orientation of the society which in our case is evaluated within the so-called Europe-Atlantic cultural circle. In this context we embrace the idea that the notion of a universal hierarchy of needs has not been appropriately substantiated [15]. We therefore maintain that the creation of an indisputable and universal theory of sustainable development in the spirit of the critical rationalism of K. Popper is highly improbable (at least in the foreseeable future). These doubts should, however, not serve as a justification for disputing the practical need for research on the problem in the broad context of an economic, social and environmental context in terms of the aforementioned analysis. It is highly likely that significant contributions will be made in the future by regional approaches whose notable advantage (apart from their direct ties to the application of the subsidiarity principle) is the option of some abstraction from the hierarchically superior problem of value orientation.

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THE REGIONAL RELATIONSHIP BETWEEN QUALITY OF BUSINESS AND SOCIAL ENVIRONMENT: HARMONY OR DISHARMONY?

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The paper assesses the relationships between the quality of business and social environments on the example of micro-regions (districts of municipalities with extended powers) and meso-regions (NUTS 3) of the Czech Republic. The applied approach develops the concept of the quality of life including the identification of system links to regional competitiveness and sustainability of development. In this context, the assessment of the business component of the regional environment that has been already carried out was supplemented with the assessment of the social component, when the regions were divided into progressive, standard and regressive. In both cases, it has been proved (in correspondence with core-periphery theories) that there is a tendency towards a decrease in the environment quality in the direction to regional borders. Subsequently, we evaluated the balance of the classification of regions (districts) within the individual components and based on this, the districts of municipalities with extended powers were divided into three types: business-oriented (type A), complex (B) and socially oriented (C). The proportion of the “balanced” type B is slightly lower than that of the two remaining “unbalanced” types. Naturally, the results of NUTS 3 evaluation correspond with this. A similar result was obtained in the case of the evaluation of regional harmony, which is understood as a qualitatively higher level of balance meeting socially desirable development standards. In correspondence, its level is defined by the proportion of type B regions (excluding the regions with business as well as social environment quality below average and also regions that are environmentally devastated) and type A regions (excluding the regions with social environment quality below average). The results show that from the perspective of the distribution of inhabitants, relatively harmonic relationship prevails, while from the purely territorial perspective, the prevailing relationship is disharmonic. The obtained knowledge corresponds with the hypothesis about a positive effect of the regional harmony of the business and social environments on the long-term sustainability of development (a bad quality of social environment significantly reduces not only residential but also investment attractiveness of regions).

Key Words: regional development, business environment, social environment, harmony, sustainability.

JEL Classification: R11, O18.