



## How to assess quality of life. Theoretical and methodological research aspects in cross-border regions

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### How to cite:

Angelovič, M. and Ištók, R., 2016: How to assess quality of life. Theoretical and methodological research aspects in cross-border regions. In: Szymańska, D. and Chodkowska-Miszczuk, J. editors, *Bulletin of Geography. Socio-economic Series*, No. 32, Toruń: Nicolaus Copernicus University, pp. 19–32. DOI: <http://dx.doi.org/10.1515/bog-2016-0012>

**Abstract.** In our paper we deal with both the theoretical and methodological aspects of our research, which focuses on the quality of life in cross-border regions. The aim of the paper is to draw on the methodological system for assessment of the quality of life in those regions, taking into consideration both the objective and subjective dimension. The first part of the paper contains the use of qualitative methods when assessing the quality of life, which, in our understanding, are not sufficiently applied in the process of assessment of quality, not only in the field of Geography. We also focus on the definition of the key terms related to our work, such as 'quality of life, border and border-region/neighbour'. The main emphasis of our work lies in the formulation of the theoretical and methodological model of the quality of life assessment in the cross-border regions. The methodological outline of researching this issue is presented in the chart. The scale of the region is a key element we take into consideration, since it is significant when choosing the appropriate method of life quality assessment. We also distinguish between the application of both the qualitative and quantitative research methods on various scales. In our opinion, the representation of the qualitative methods in research should increase with the increase in the scale of the area researched. In the conclusion we provide selected outcomes of our research at various scales, which confirm the validity of our theoretical basis, since we came to various findings, depending on the scales researched.

### Article details:

Received: 23 June 2014  
Revised: 01 October 2015  
Accepted: 22 February 2016

### Key words:

quality of life,  
border,  
border region,  
methodology,  
scale.

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## 1. Introduction

Quality of life is studied by various scientific disciplines. Geography is not left behind, and in recent years there has been a rather fruitful debate concerning the matter. There are a number of Slovak Geography experts who systematically deal with the issue of quality of life, which is indicated by a number of scientific studies, published nationally and internationally in scientific journals (among others Andráško, 2005; 2006a; 2006b; 2007; Bacsó, 2007; 2008; Ira, 2003; 2005; Ira, Andráško, 2007; 2008; Ira, Murgaš, 2008; Michaeli et al., 2008; Murgaš 2005; 2009; Spišiak, Danihelová, 1998).

A number of scientific publications have already been created in the form of monographs dealing with research on the quality of life (Murgaš, 2011; Andráško, 2013; Kačmárová et al., 2013). The importance and timeliness of addressing the issues of quality of life are demonstrated by the numerous papers in international journals, mostly of Anglo-Saxon provenance (Masik, 2010; Brauer and Dymitrow, 2014; Hrehorowicz-Gaber, 2013; Tej et al., 2012).

The way the quality of life is viewed and studied has changed in recent years. As Pacione (2003) notes, people from the developed countries realise that the quality of life is not just a simple function of material health. Bačová (2004) states that the progress rhetoric in modern society is being replaced by the quality of life rhetoric. These facts significantly influence the growing interest in research on this issue. The greatest advantage of applying geographical knowledge when researching quality of life is that it allows the findings to be interpreted in a synthetic-spatial form.

As mentioned by Pacione (2003), when studying quality of life, whatever the field of study, it is

necessary to emphasise the application of the qualitative research methods. The significance and importance of these methods have been studied and mentioned by a number of Slovak authors, e.g. Matlovič (2006a; 2006b), Ira (1993; 2000), and Rochovská, Blažek, Sokol (2007). Since quality of life is not understood as a one-dimensional entity, qualified by only quantifiable indicators, it is, in our view, absolutely necessary to include this type of methods when conducting research.

The geographical context of quality of life is closely connected to the regional research, which is based upon the study of the relationship between humans and the environment, which is crucial when conducting research on quality of life from the geographical aspect. Quality of life is related not only to humans, but also to the environment in which humans exist, which is spatially differentiated, thus determining Geography to study quality of life in relation to its spatial differentiation (Ira, 2010).

The interaction of Geography and quality of life can be interpreted at three levels. The first level represents the relevance of the issue within geographical research, the second level is the approach Geography takes when researching quality of life, and the third level is the presentation of the research findings spatially expressed, which may serve as a basis for further analyses and forming of new regional political strategies to improve quality of life in the regions of need. We follow this line of thinking, in sync with the views held by Martin (2001), who emphasises the need for stronger active-approach oriented geographers, and improvement of the ties they have with those in charge of the local, regional and even national policies.

Empirical data gained from the quality of life research may be very helpful for politicians, especial-

ly in order to find out about the social and cultural needs of the inhabitants of a particular region. The data may provide invaluable information about the way the public opinion changes and develops, and also indicate the level of social significance of various political ideas (McGregor, Camfield, Woodcock, 2009). We see quality of life as an ideal concept for the presentation and application of geographical research findings in real politics, and also in forming of a prospective regional development concept, which would eventually lead to an increase in the social relevance of Geography.

Geography brings an irreplaceable methodological approach when researching quality of life, represented by its specific presentation of the findings. Geographers are able to analyse and synthesise the spatial differentiation of quality of life at various scales, which enables them to identify the problems in particular regions and also suggest possible solutions. Since the quality of life as a phenomenon may be a complex one, the process of identification of the problems and causes may be extremely difficult in some regions. When combining both the quantitative and qualitative research method, we believe one is able to identify the issues that lower quality of life more precisely.

Implementation of qualitative methods when assessing quality of life is also related to the need for broadening the indicators responsible for improvement of social politics and regional development. As stated by Veenhoven (2002), social politics needs to identify subjective indicators. Social politics, as one of the means of accelerating the regional development, is not limited only to providing material wealth, much as the social development cannot always be quantified on the basis of objective indicators, since these lightly reflect the mood and preferences of the public. Hence, the politicians have to learn to distinguish between providing material sufficiency and the quality of life of citizens. We understand the concept of quality of life as a concept that unifies both the quantitative and qualitative indicators, which together represent a measure to go by, and are the result of good regional and social politics.

The aim of our paper, based upon the evaluation of the relevant literature that deals with quality of life and political borders, or its neighbouring regions, along with our current empirical studies, is

to propose a methodological procedure related to the quality of life research in cross-border regions.

## 2. Quality of life approaches

When researching quality of life it is possible to apply two approaches (cf. Bačová, 2008; Babinčák, 2008). The first one would be the so called objective approach, in literature often referred to as the ‘Scandinavian approach’, which is rooted in the analysis of socio-economic indicators. Within this approach it is the statistics that determine quality of life, since they represent the economic situation of a particular region and also other socio-economic indicators. The second, subjective approach, known as the ‘American approach’, considers the people of a region and their own evaluation of quality of life to be the best criterion of assessment.

The Scandinavian approach (SA) is based upon the works of authors who understand good life through the resources which a person has at their disposal in order to fulfil their objective needs. The resources represent income, wealth, education, knowledge, social network, security, etc. The environment an individual lives in is understood as an arena which stimulates their life quality in either a positive or negative way, hence the environment could be seen as one of the key factors of this approach. Those who follow this approach appreciate its objectivity when assessing quality of life based upon selected indicators. They claim that subjective evaluation is dependent on the level of an individual’s aspirations, and the level of subjective satisfaction and acceptance only reflects the level of the individual’s adaptation to the environment s/he lives in. This is also the reason why some authors do not accept objective indicators as adequate to measure quality of life (Bačová, 2008).

The American approach (AA), which stands in contrast to the SA, is based upon an individual’s own assessment of life quality. The AA stems from the teachings of utilitarianism, in which neither the social nor human development is based upon objective conditions of life, but rather on the subjective level of peoples’ satisfaction, which is represented by an indicator of happiness. It is a social-psychological approach, which has been developing in Ameri-

can psychology constantly since the mid-1930s, and it comes from the statement: “if a man defines a situation as real, consequences may be real”. Basic indicators of quality of life are subjective indicators and the most competent assessors for this evaluation are the researched individuals themselves (Bačová, 2008).

A combination of both the approaches is, in our opinion, the best way to assess quality of life. Both the approaches have positives and negatives and neither can fully comprehend the whole scale of factors that determine quality of life; thus only a combination of them both can bring verifiable and justifiable results.

### 3. Quality of life characteristics

There is no universally accepted definition of quality of life, as there exist various approaches and objectives of particular scientific branches when examining the issue.

The first problem is the ambiguity of the term quality of life. When defining the term we need to characterise its two components – quality and life. Both the terms, even though some authors would argue that quality is easy to define, are difficult to define, which complicates the matter of defining the term in which both of them apply. Does that mean that a precise understanding of both the terms will enable us to comprehend what the quality life means for all the inhabitants of a particular region? Will all the experts and scientists align with that definition? Will it be applicable to all regions? In our understanding it is essential to look for a compromise between an economic (objective) and a psychological (subjective) understanding of life quality and apply this combined approach accordingly with regard to particular conditions of the environment in which the research takes places.

Mareš (2006) notes it is not necessary to establish the term applicable universally to all disciplines. The definitions of the term should only be valid for a particular discipline/field of research, and he offers a variety of possibilities when forming and defining quality of life. As stated by the authors of the study *Teórie a nástroje merania subjektívne hodnotenej kvality života*, many authors will be satisfied

with stating the problems related to the definition of quality of life without providing an explicit definition (Kačmárová et al., 2013).

It is an interesting idea, especially seen through the geographical perspective, which states quality of life is not an environmental attribute, but rather the interaction of the environment and people, and the entity as such is difficult to comprehend (Pacione, 2003). He further states that geographers focused on the study of social indicators in order to identify and analyse social-spatial differentiation in quality of life in various scopes from the global to the local. In his opinion, every formulation of quality of life must stem from two fundamental elements – psychological-psycho/social mechanisms, which produce the feeling of quality in life and external phenomena, which influence this feeling. We try to point to the dichotomy between *well-being* and *ill-being*, i.e. good and bad quality of life.

Murgaš (2009) takes the above-mentioned dichotomy into consideration when defining quality of life. In his view the quality of life consists of psychological, somatic, religious, social and economic ‘goods’, which result in a subjective feeling of happiness or satisfaction. These ‘goods’ are challenged by health, sociopathological, economic and environmental ‘bads’. This clash takes place in a spatially differentiated outer environment.

The authors of *Vybrané aspekty kvality života vo vnútorných perifériách Slovenska* Horňák a Rochovská (2007) define quality of life as follows: “*Quality of life is a result of mutual interaction of social, health, economic and environmental conditions, which are connected to human and social development. It represents, on the one hand, the objective condition for a good life and on the other the subjective experience of living a good life. The objective side of quality of life is about the fulfilling of social and cultural needs, depending on sufficiency of sources, and social acceptance of an individual and their physical health.*”

Murgaš (2005) also provides his own definition of quality of life: “*Quality of life is formed by somatic, psychological, social and economic goods which result in a subjective feeling of happiness or satisfaction - challenged by health, sociopathological, economic and environmental ‘bads’*”. Good, in Murgaš’ definition means prosperity, which he understands as the representation of all positive values, not only

material ones. Bad means deprivation, which he understands as the representation of all negative values, both material and immaterial ones. At the same time he adds that inasmuch as human life is not only good or bad, so quality of life gains its complexity by the addition of human capital values.

A significant work that deals with quality of life viewed from a geographical perspective is *The four qualities of life* (Veenhoven, 2000). In this work Veenhoven offers a model of four qualities of life, which he organises in a chart that combines spatial (objective) and personal (subjective) quality of

life (chart no. 1). Veenhoven claims we cannot talk about quality of life meaningfully; hence it is better to talk about the four qualities of human life. The first one is *liveability*, which means environment and its appropriateness. The second one is *lifeability* – life capabilities of a particular person. The third one is *utility*, the way the life of a person is useful, and the fourth one is *appreciation*, understanding of one's own life (tab. 1). These four should not be added-up together, since he believes their sum is only of insignificant value. The best criterion and indicator is how long and happily a person lives.

**Table 1.** Four categories of quality of life

Outer (objective, spatial) quality of life		Inner (subjective) quality of life
Life chances, opportunities	Appropriateness of environment for life ( <i>liveability</i> )	Personal life-ability (life-ability)
Life results, form of life	Life usefulness (utility)	Understanding of one's own life ( <i>appreciation</i> )

Source: Veenhoven (2000), adjusted according to Murgaš (2009)

The medical approach to quality of life is most complexly covered in the project of the World Health Organisation (WHO) *Measuring Quality of Life* (1997), which assumes there are six areas that comprehend quality of life, with a number of indicators within each of them. The areas (domains) are as follows: physical health, psychological functions, level of independence, social relations, environment, spirituality (religion) and personal belief.

Based upon the above it appears that quality of life is a multidisciplinary term, and when trying to define it we have to proceed from various aspects of human life, and the environment in which this life takes place. When assessing quality of life we have to, similarly, respect a number of levels (scales) of research and methods.

Geographers understand quality of life not only through existing socio-economic conditions, but also through human preferences and fulfilment of quality life within the natural environment. This is where two levels meet: human preferences, i.e. subjective quality of life and preferences of environment that enable human preferences to be fulfilled, i.e. objective quality of life. Quality of life can

thus be defined as the interaction of human preferences and possibilities for their fulfilment within a particular geographical environment. The barriers, such as borders, influence their neighbouring environment in various ways, and so they influence also quality of life of those living in its neighbouring regions. Therefore, in our understanding, it is essential, when assessing quality of life, to combine both the quantitative and qualitative methods.

#### 4. Border as a factor that influences quality of life

Border is a term Geography has studied for a long time, and is one of our key words in order to fulfil the aim of the paper. To determine quality of life in this context it is essential to define the term 'state border' and characterise its influence on quality of life. A state border is usually defined as a strong socio-economic phenomenon, which significantly influences the development of neighbouring regions and thus indirectly has an impact on quality of life

of its inhabitants via means of its objective level. A border should not be understood as a separate singular element of space, but as an integral part of a cross-border region. A border creates a bordering effect, thus having an impact on the area that surrounds it, which consequently defines itself as a cross-border region. A border is an inseparable part of spatial differentiations.

Political-geographical research focuses on political borders, which are most often represented by state borders and borders of territorial and administrative regions within a state. These borders embody competences of various political bodies of national and intra-national character (Ištók, 2004).

In his work *Cezhraničné väzby a cezhraničná spolupráca* (2005) Halás states that the majority of authors, when defining a border, do not aim for the definition of a border itself, but also for the definition of the surrounding and neighbouring territory, and as an example he uses various authors, e.g. Heigl (1978 in Halás, 2005), who understands a border as a legal line marked in nature, which connects regions that form an administrative, economic and political unity, of which it is the very border that determines the border area and space. On the other hand, Demek (1984 in Halás, 2005) states that a border is a result of a discrete provincial sphere, or, more precisely, our discrete notion of it.

As mentioned above, the state border is of significant importance to us. A simple and concise definition of a state border is provided by Rumpel (in Baar et al., 1996), who says it is necessary to understand a border as a “*stipulated line on maps and in terrain, which separates the territory of one sovereign state from another, or from the territory that is not claimed by the sovereignty of any other state, e.g. the high seas.*”

According to the international law, state borders vertically determine the area above and beneath the ground surface. The state border is understood as an area that is perpendicular to the ground, and it copies the same line as the border. In theory, this area and its border run into the centre of the Earth and also to infinity in Space. In real life the border is determined by the deepest geological drill holes and by the highest area that can be militarily controlled.

The state border has been defined in a number of ways. What all those definitions usually have in common is the understanding of a border as an el-

ement that defines the territory in which the state applies its laws and power, in other words its sovereignty, and thus, within that territory a certain set of rules and procedures apply. When it concerns political borders, it is important to mention the cooperation of the countries in the cross-border areas, which directly influences the development of those regions, and may eventually even result in the abandonment of border checks, which does not deny the existence of borders, but only leads to a looser regime of crossing the borders.

The definition of a border is often connected to the definition of a cross-border region. A cross-border region is generally understood as the territory that occupies both sides of a border. It is possible to understand it as a territorial region, implemented in the particular administrative hierarchy, which has a common border with one or more territorial and administrative parts of the same type, located in a neighbouring state (Švecová, 2002 in Čuchorová, 2007).

After the term cross-border region has been clearly defined, it is essential to notice nuances that distinguish bordering regions and cross-border regions. A bordering region is a region of one state that adjoins a border of another state. A cross-border region is a territory of two or more states that share a common border. Bordering regions are located only on one side of a border, whereas cross-border regions are located on both sides of a common border.

A border creates a so-called bordering effect, which means it has an effect on its surrounding territory and thus forms a bordering region by itself. The bordering effect is a significant phenomenon for the development of cross-border regions and it influences the everyday life of its inhabitants, and the quality of it. The bordering effect and its region have been studied by a number of geographers, and both these phenomena are interconnected with the border and its permeability.

What causes problems is the identification of territorial instrumentality and the identification of the bordering region in the actual environment and conditions. Two criteria are commonly used in order to determine the bordering region – spatial and functional.

The territorial criterion reflects the distance or accessibility to the border in time. In practice it is common to use the borders of the territorial-ad-

ministrative units, which are represented in Slovakia by counties (districts) located at the border (Rajčáková, 2005). This criterion has a number of advantages and also disadvantages, the former being its exactness of territory, determined by the territorial-administrative borders, and its pragmatics, since the data needed for more detailed analysis are often accessible only at the administrative level of those units, and the latter being that this division is to some extent determined by the size and structure of these units, as much as by the structure and size of the state alone (Halás, 2002).

The main yardstick of the functional criterion is the connection of a region with the territory located on the other side of a border. When applying this approach there are no exact borders of the bordering territories and emphasis lies on the influence a border has on those surrounding territories (Rajčáková, 2005).

Based upon the quoted passages we can confidently state that a border undoubtedly influences its surrounding area and thus also has an impact on the life of its inhabitants. In our opinion a border has a direct impact on the objective, economic quality of life.

## 5. Peripherality, permeability and quality of life

The research on quality of life in the cross-border regions cannot be conducted without the phenomena of area polarisation, peripherality and border permeability being taken into consideration, with the former being studied by a number of Geography experts (Matlovič et al., 2008; Matlovič and Matlovičová, 2011; Klamár, 2011; Halás, 2005; 2008; Havlíček and Chromý, 2001).

The theses that deal with the above-mentioned polarisation perceive it as a significant barrier. We anticipate that, in the current 'borderless' Europe of today, a great emphasis lies on the socio-economic balance in the peripheral inner border areas, and less attention is directed to border permeability. This was one of the reasons why we decided to continue to assess the subjective level of quality of life in the cross-border areas both with and without a border-crossing of the Schengen area.

Halás (2008) states the permeability level of the state border is one of the most significant factors that determine the development of the cross-border regions. Once the border is closed the development as such is greatly restricted and limited in these areas. In the case of Schengen, the area of a country that forms the outer 'wall', especially its border, thus becomes the periphery. Many other theoretical theories and works deal with the issue of periphery.

In theory, it is possible to anticipate a great variety of impacts this peripherality can possibly have on the quality of life in those areas.

The first impact, owing to the lower border permeability, is the decrease in the socio-economic level of the cross-border areas. Data provided by Eurostat clearly show that the eastern Schengen border can easily be labelled 'the poverty border', possessing many negative socio-economic indicators which lessen objective quality of life.

The second impact is connected to the subjective dimension of quality of life, and it is very difficult to form the final findings without further scientific studies. Based on our partial research (Angelovič, 2014) it is yet possible to state that the border permeability directly influences quality of life, though it requires further and deeper investigation.

We assume that the trends of socio-economic inequalities of neo-liberalism will eventually put pressure on the research and analysis of the regional disparities at both the national and intra-national level. The new neo-liberal economic system of management allocates the capital to the areas with the greatest potential profits. Borderless Europe enables capital shifting within its area with almost no control, almost anywhere and anytime. This leads to many socio-economic inequalities, which may result in not only individual but also regional socio-economic crisis, thus eventually worsening and lowering both the subjective and objective quality of life. In return, this also damages the regional image, which can be reinstated only with an enormous effort. All of the above contributes to damaging the quality of life at the periphery, discourages the potential immigrants, and is also negatively perceived by its inhabitants. Almost all of the characteristics mentioned previously have one common denominator – the eastern Schengen border.

## 6. Proposal of a methodological procedure for assessment of quality of life in bordering regions

With a number of proposals, factors and conditions available it is very important to determine the intensity of key factors that have an impact on both the above-mentioned approaches when assessing quality of life, the most difficult one being elaboration of the methodological procedure for assessment of quality of life, taking into consideration and differentiating two levels of assessment.

The first level of assessment of quality of life is the one based on socio-economic indicators. This assessment is, in our opinion, more suitable for assessment of objective features of quality of life and for assessment in territorially larger regions (smaller scale) with the application of quantitative methods. The size of a territory, its various natural and socio-economic conditions, along with the number of inhabitants that live in it limit the application of qualitative methods. Quality of life can be assessed even without direct contact, or physical presence, in a particular area; so it is possible to do it based only upon available statistical data, which is often the case of various indexes of quality of life that point to the statistical data of particular states.

The second level of assessment of quality of life is the one based on direct, personal contact with the environment and people living in the area (greater scale). In this case, the socio-economic analysis can provide a larger scope for the assessment of outer factors that have an impact on quality of life, and in our opinion qualitative research methods are more suited to the size and nature of this territorial scale. Assuming every human being is able to think logically and verbally express their surrounding world and their position within it, we may use the data gained in this way when assessing quality of life, which is influenced by various socio-economic phenomena, one of them being the border.

As already mentioned, assessment of quality of life is a complex process and should not be conducted based just upon human-geographic analysis of the region, but should also be conditioned by the application of qualitative research methods. Application of qualitative research methods in or-

der to improve the quality of research in geography has been emphasised by Rochovská, Blažek, Sokol (2007) in a paper that deals with the issue of the necessity and importance of qualitative research.

When conducting research on a border's influence on the quality of life of the inhabitants of bordering regions it is essential to combine both the qualitative and quantitative research methods. Quantitative methods should apply when characterising objective features of quality of life and qualitative methods should apply when subjectively assessing the same phenomena. The size of the researched territory, the scale, should also determine which of these approaches apply. The most important thing, however, is the final synthesis, which should provide a summary that would inform about the quality of life of the inhabitants of a particular bordering region.

When assessing quality of life in bordering regions we ought to take into consideration a number of factors that influence how the state border operates, and also its specific activities and functions that directly influence its presence. It is also important to realise that each state's policy, on both sides of a border, has a direct impact on the functionality and function of the border, related not only to their either friendly or hostile character, but also to their participation in the integration processes.

Cultural globalisation, as mentioned by Donnan and Wilson (1999), opened up the borders as much as economic and political internationalisation, and also weakened the state control that would limit and monitor the movement of people, goods, capital and ideas. This process has been very common in more developed countries, especially in the area of European integration, which eventually resulted in the forming of the Schengen Area (Schengen). On the other hand, an opposite process has also taken place, i.e. growth of the barrier function of state borders, represented by the 'outer' states that joined Schengen.

When assessing quality of life it is essential to realise that borders have specific features that differentiate them from other parts of a country, and that inhabitants of those areas are a part of the social and political system in a slightly different way from the rest of the citizens (Donnan and Wilson, 1999). It is also important to note that the issue of borders is a very sensitive one, since the factors that

determine cross-border cooperation or conflict, as much as the political consequences which these relationships might have, have a great impact on various levels and dimensions of the life of the citizens of particular states.

The presence of a state border thus influences the life of the bordering inhabitants and their quality of life in a very specific way. States on both sides of a border create space for certain economic and social growth, which alone is the fact that would determine border crossing, especially by those living in the cross-border areas, which stimulates not only legal activities (purchasing merchandise), but also illegal ones (good and people smuggling). Legal and illegal merchandise exchange at a border reflects the economic situation of bordering states, and undoubtedly, either directly or indirectly influences the quality of life of people living in cross-border regions.

In addition, it is also important to mention the significance of the border as a source of advantages that stimulate development and are connected to its location, which is most significant in the areas close to border-crossing points, and it is often manifested not only by the mutual business mentioned above, but also by cheap services, gastronomy, hotels and transit services (Bański, 2010).

When assessing quality of life in bordering regions it is also important to take into consideration the border and its permeability in connection to its barrier function, which separates the state from outer agents. This function of a border is influenced by international relations, especially those of the neighbours on each side of the border. We can thus speak of three border meta-functions:

1. disintegrative (shutting out of the border for all forms of contact)
2. fragmentative (degree of border openness may be limited to some agents)
3. integrative (high degree of openness and characterised by intensive contacts, Moraczewska, 2008).

With border permeability in mind Martinez (1999) determined four cross-border regions: alienated, coexisting, cooperative and integrated. Each of these possesses specific development conditions, which are influenced by the state border's permeability, thus also various platforms to assess the quality of life of its inhabitants.

In this context we suggest applying quantitative research methods to assess the objective side of quality of life in territorially larger regions with a greater number of inhabitants. In Slovakia, in accordance with its political and administrative structure, this would represent the whole of Slovakia, and/or county administrative units. It would be appropriate to use annual indexes for particular states at this scale level. At lower scale levels it is necessary to use socio-economic indicators available, comparable on both sides of the border. It is crucial, when analysing data, to choose appropriate indicators of quality of life in particular regions. Murgaš (2009), in our opinion, applied an appropriate method when analysing socio-economic indicators of quality of life. The author assesses quality of life in Slovakian counties based upon 21 indicators, with each of the indicators being assigned a certain level of gravity by the panel of experts. The indicators were organised into three groups (domains) – prosperity, deprivation and human capital. Based upon the domains an aggregate index of quality of life for counties in Slovakia was calculated. This approach is a good example for assessment of objective quality of life, which, however, only represents a part of the overall assessment, and as such needs to be supplied with assessment at the subjective level.

We recommend applying qualitative research methods when present in person in either communities or municipalities that have a direct contact with the state borders. When researching the subjective level of the quality of life phenomenon, we suggest applying a questionnaire, a semi-structured interview, a case study or a descriptive observation method.

All of the above qualitative research methods should clearly be assigned the degree of gravity they possess before the research takes places, and should be combined into a whole. The point of combining them is to enable a comparison of the findings and to make it possible to provide a coherent research outcome.

## 7. Outline of outcomes of the suggested methodological approach

Based upon our suggested methodological approach we determined three quality of life research levels. The research was conducted as part of the disserta-

tion “*Influence of a border on quality of life of people living in the neighbouring regions, based upon the Slovak – Ukrainian border case study.*” The first level focused on quality of life based upon the indexes of quality of life at the state level, i.e. in both Slovakia and Ukraine. The second level focused on the comparison of selected macro-economic indicators in administrative units within both the countries – cross-border regions. In Slovakia these were represented by both the Prešov and Košice autonomous administrative units, in Ukraine it was the Transcarpatia (Zakarpattia Oblast). The third level focused on the qualitative research in selected municipalities on both sides of the border.

Based upon the comparison of selected indexes of quality of life it was obvious that quality of life, especially its objective dimension, is higher in Slovakia than in Ukraine, which is further strengthened by a brief socio-economic analysis of selected indicators. Based upon these objective and relevant facts we expected a similar result at the subjective level of assessment. To our surprise, on the contrary, the border is viewed more positively in Ukraine. In addition, the bordering regions on the Ukrainian side are understood as a better place for living than their Slovak counterparts. This proves two interesting points: the first one being a certain exclusivity of the Schengen bordering-regions in Ukraine, and the second one is the low correlation between the objective and subjective level of quality of life. This also confirms our hypothesis that the combination of both the research methods when assessing quality of life is necessary, depending on the size and scale of the researched territory.

## 8. Conclusion

The outcome of research should be a summary that is highly reliable, credible, valid and comprehensive, and all methods, methodological procedures and a final summary of findings should be synchronised and adjusted to this aim. We see the summarising part of the whole process as the key part of the whole, since, if a researcher misvalues or misjudges partial outcomes, it can result in over/underestimating their relevance, which, eventually, may distort the findings of the research.

We recommend forming the methodological procedure for assessment of quality of life in geography to reflect, first and foremost, the scale, i.e. the size of the territory it is aimed at. Our recommendation stems from our experiences and observations gained in a real-life environment and applies especially to research on borders and quality of life. The fact that Slovakia has become a part of Schengen enabled an increase in the assessment of the objective level of the quality of life of the inhabitants in Slovakia. This development, however, has had specific consequences on the quality of life of people from the cross-border regions.

When assessing the gravity of particular indicators it is very useful to lower the gravity of the quantitative indicators and increase the gravity of the qualitative ones when the territorial scale increases, which increases the validity and reliability of a piece of research. In addition, we think this eases and simplifies the work and effort of a researcher, since it is very difficult to gain the relevant qualitative data for larger territorial units. We will try to apply these findings in our further research. The conclusions of our findings in this paper are presented in table 2.

## Acknowledgment

The contribution is part of KEGA grant no. 024PU-4/2012 „Geokonfliktológia - the concept of teaching a new subject and the development of the textbook” (project leader: Prof. RN Dr. Ištók Robert, PhD.).

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**Table 2.** Application of quantitative and qualitative methods in research and assessment of quality of life on various territorial scales

Quality of life research methods	Territorial size/scale				
	NUTS I	NUTS II	NUTS III	LAU I	LAU II
Quantitative	international indexes, socio-economic analysis	socio-economic analysis	socio-economic analysis	basic economic info about municipality/community	Basic socio-economic info about municipality/community
Qualitative	-	for selected groups of population – questionnaire, case study, etc.	for selected groups of population – questionnaire, case study, observation, etc.	questionnaire, interview, oral history, observation, case study, etc	questionnaire, interview, oral history, observation, case study, etc
Correlation of both methods	prevalence of quantitative	prevalence of quantitative, qualitative applicable to selected groups of population	both methods of equal importance, qualitative limited due to territorial size	prevalence of qualitative, quantitative serve as supplement to qualitative	prevalence of qualitative, quantitative serve as supplement to qualitative

Source: authors

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