

QUALITY OF LIFE PECULIARITIES IN LITHUANIA REGIONS

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Abstract

Quality of life (QoL) subject is dealing with theoretical and empirical questions about fulfilment of certain definite human needs, which are termed in some predefined contexts or areas. Locally built potential (described in objective terms) to support, sustain and fulfil adequate human needs along with respective individual experience about actual fulfilment of these needs (measured subjectively) forms the phenomenon of local place related quality of life. The article presents results of measurements of QoL in Lithuania regions (i.e. administrative counties). Set of social indicators, data on which is provided by Lithuania Statistics Office, is being used. Selection of particular indicators to be used is reasoned and argument by following conceptual QoL framework that incorporates five core QoL domains (i.e. material, social, emotional, physical and productive QoL). Objective and subjective sides of core quality of life domains are measured. Subjective evaluation of residents' ability to make their end meet is seen as influenced by objective locally existing potential and its subjective perception. The article reveals specific QoL differences in Lithuania counties. These differences are areas to be addressed by socio-economic development strategy decision-makers.

Keywords: quality of life, local community, Lithuania regions.

JEL Classification: R11, R58.

Introduction

Quality of life (QoL) measurement systems used for assisting in local place strategic development planning are being developed in many local places of various countries in all regions of the world (e.g. Sirgy, Phillips & Rahtz, 2009a, 2009b, 2011). Thus QoL measurements by the sets of certain selected community indicators are not a new phenomenon. Various operationalisation approaches are used. Each approach reveals a different notion of the concept and thus highlights different ideas about components' relevance (Noll, 2002). Lack of widely approved conceptual framework leaves much of space for trying new conceptual approaches, testing new ideas conceptually as well as empirically. It is noted that QoL measurements related issues are not solved conceptually. Field of empirical QoL investigations also remains important; one having its practical usefulness for building socio-economic development strategies that concern QoL improvements.

QoL in Lithuania was measured empirically by Vanagas (1997, 1999), Milaševičiūtė, Pukelienė, & Vilkas, (2006). Different research approaches were used. Investigation of correlation between selected cause and effect quality of life variables was used by Vanagas (1999). Methodology based on subjective evaluations was employed by Milaševičiūtė, *et al.* (2006). The subject was investigated conceptually by Pukelienė, & Starkauskienė, (2009), Merkys, Brazienė & Kondrotaitė (2008), Norkus (2004) and some other authors.

The present article builds on the theoretically reasoned conceptual QoL framework (Rybakovas, 2011) to present results of measurements of QoL in Lithuania regions. Set of social indicators, data on which is provided by Lithuania statistics office, is being used. Selected indicators are picked according to the quality of life measurement framework while taking into account availability of the required data on the regional level. All elements of conceptual framework are covered just with some minor considerations that are discussed further in the article. The article is not intended to provide some overall aspects encompassing measurements. With the intention to test the developed framework just minimal number of indicators is used. The 12 indicators' set encompass existing potential to fulfil human needs (i.e. objectively measured external to the individuals QoL determining local place characteristics – local place's livability) along with the indicators on level of experienced fulfilment of human needs (i.e. subjective quality of life). The list of the selected indicators illustrates all core local place related QoL domains that are included in the conceptual framework.

Objective of the article is to reveal empirical peculiarities of life quality in Lithuania administrative counties. Descriptive analyses of statistical data are employed as research methodology.

Exposed QoL peculiarities in different administrative regions of Lithuania are expected to be useful for government bodies dealing with the strategic decisions of socio-economic regional development and fostering competitiveness of the regions. Clarified empirical characteristics will be useful as empirical background for the scientists engaged in modelling strategies for local place QoL improvements.

The concept of local place related quality of life

QoL concept deals with the measurement and management of human experiences of feeling satisfied with very different fields of individual lives. The concept of quality of life is adapted and used in a broad range of domains. Various health care, social, environmental and economic aspects related ‘quality of life’ are measured using respective branch of the same broad concept. Neoclassical economic theory, for example, terms human needs from the subjective individual consumer desires perspective (Norkus, 2004). Higher extents of satisfaction of those desires are seen as the potential for higher QoL level. If individuals’ desires are met without harm to others, then they have right to meet their desires whatever they are. Researchers try to answer how society should be organized that individuals with different desires and conceptions of the good life could successfully cooperate.

Followers of the “movement of social indicators” look at the QoL from the formal measurement perspective, trying to construct systems of social indicators that should help to compare QoL levels at different communities (e.g. Diener, & Suh, 1997). It is assumed that QoL of any certain community depends in the first place on the level of its economic and social development – i.e. productivity of community’s economy and social aspects such as public security, extent and quality of public services and its availability for community members. Among other determinants, efficiency of public resource management, quality of health care and education systems, environmental conditions, and others could be mentioned. Various social indicator systems aligned for administrative and strategic development planning and management purposes are being developed extensively in all over the world (e.g. Sirgy, et al, 2009a, 2009b, 2011).

Besides material dimension of welfare, contemporary QoL concept encompasses immaterial aspects of the certain living situations (Noll, 2002). It means that the concept is supposed to include both objective features (the actual living conditions) as well as subjective well-being of the individual citizens. Local place related QoL from the objective side is associated with the local place’s (i.e. living / residential area’s) socio-economic system as one being built directly by residents along with elected public government representatives responsible for management, administration and handling of public facilities that are supporting and sustaining variety of human needs. Subjective side of local place related QoL is expected to consider on the individuals’ experience as subjectively evaluated extent of fulfilment of their human needs.

This conceptual proposition stating that QoL is always defined both in macro (societal, objective) and micro (individual, subjective) terms is widely cited and already well established (e.g. Pukelienė and Starkauskienė, 2009; Veenhoven, 2005, 2009; Noll, 2002, etc.). It integrates both neoclassical (subjective) and social indicators based (objective) interpretations of QoL. According to Pukelienė and Starkauskienė (2009), core and most often proposed in scientific and practical implications local place related QoL domains (areas) are following: 1) material, 2) social, 3) physical (health related), 4) emotional, 5) productivity related (i.e. determined by and related to work and productive activity QoL). By following Veenhoven (2005, 2009), it is assumed that perceived (i.e. experienced) quality of life emerges from the locality’s livability, defined as degree to which local socio-economic system provides its residents with their requirements related to place of living. It is measured by objective characteristics referring to living conditions of a society.

This presumptive linkage between external to the individuals objective local place’s socio-economic environmental conditions (i.e. potential opportunities to fulfil human needs related to place of living) and subjective perceptions of human needs fulfilment (i.e. individual experience about OoL) could be seen and treated as being public life in certain local place defined by their needs (Noll (2002), also measured (Figure 1).

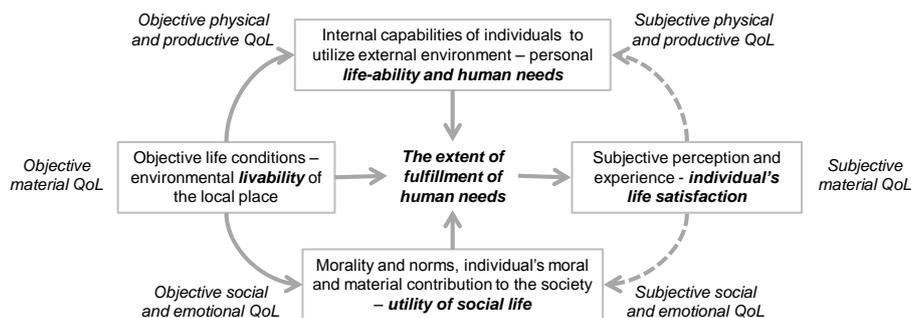


Figure 1. Quality of life concept (based on Veenhoven, 2005, 2009; Pukelienė & Starkauskienė, 2009)

The framework for measuring quality of life

Social indicators are described as statistics, statistical series and other forms of evidence, which allow assessing where certain community is, and which way it is going, taking into account values and goals, letting to assess the impacts of respective policy (Merkys, Brazienė & Kondrotaitė, 2008). According to authors, strategic management decisions based on social indicators are a feature of a democratic, contemporary modern society. Set of social indicators are used to measure QoL in Lithuania counties.

The conceptual framework provided in Figure 1 is used to measure QoL in Lithuania regions, i.e. administrative territorial counties. As Figure 1 indicates, six QoL dimensions are supposed to be measured. 'Objective material QoL' (i.e. objective living conditions in the local place) is the first of the measurement dimensions. These objective socio-economic conditions work as a background for residents to perceive some level of experienced individual local place related QoL. Experienced 'subjective material QoL' is used as the second measurement dimension (Figure 1). Beside the objective socio-economic conditions, the level of experienced subjective life satisfaction is assumed as being determined also by the individuals' capabilities to utilize efficiently present opportunities provided by the socio-economic environment as well as by the utility of social life or social cohesion at the local place. Measurement of 'objective physical and productive QoL' is supposed to indicate extent of objectively developed individuals' capabilities to utilize existing opportunities to increase experienced QoL. 'Objective social and emotional QoL' dimension is used as one able to measure objectively prevailing practices determining utility of social and public life. Two remaining – 'subjective physical and productive QoL' and 'subjective social and emotional QoL' – measurement dimensions are intended to be filled up with data on subjectively measured indicators reflecting residents' attitudes and opinions about their physical and productive capabilities and some social life practices that influence utility of social life. It is presumed that besides direct influence of objective productivity and utility of social life conditions higher levels of subjective valuation of the physical and productive, social and emotional QoL aspects are induced in some extent also by the subjectively experienced QoL. Thus some self-reinforcing feedback loops (ones that tend to increase the event that caused them) could be observed in described QoL phenomena conceptualization. It means that the framework assumes that not only better objective conditions in socio-economic environment, individuals' productivity and utility of social life, but also subjectively perceived higher level of QoL increases overall apparent local place related quality of life.

Six QoL measurement dimensions are measured using twelve social indicators data on which is provided by Statistics Lithuania. 2008-2010 year data is covered. Each of six dimensions is associated with two indicators. Selected indicators are chosen respecting above described conceptual QoL framework. Selection of indicators was limited also by the data availability on the regional (i.e. county) level.

As noted above in the article: 'There are always two facets of any measured component of QoL (which, as concluded above, are assumed to be categorized in five generic category domains: material, physical, productive, social, and emotional qualities of life) – the objective situation and subjective experience' (Pukelienė and Starkauskienė, 2009). Figure 2 lists selected indicators in association with the QoL measurement dimensions that are supposed to be measured. Table 1 provides in depth reasoning and argumentation for selection of particular social indicators to be used for measuring.

The present list of indicators should not be treated as conceptually generalized that will fit any certain socio-economic system. It is thus believed that any single socio-economic system, by following conceptual QoL framework, should be equipped with its own contextually fitted measurement instrument, representing characteristics that are in general terms.

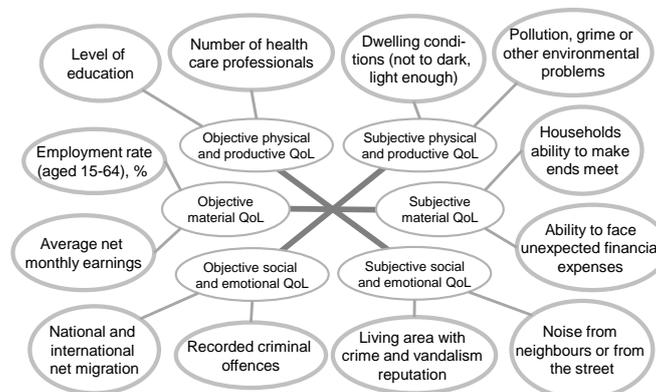


Figure 2. Core quality of life domains and selected indicators for its measurement

Table 1. Reasoning and argumentation for selected indicators used to measure quality of life in Lithuania regions

QuL domains, measurement dimensions	Social indicators*	Reasoning and argumentation
Objective livability of the local place: 'bjective material QoL' domain (natural, political, public, economical environment and material living conditions).	Employment rate (among aged 15-64), % (M3030902).	It is presumed that employment rate is determined mostly by the objective socio-economic environment at the local place. Employment opportunities determine characteristics and objective conditions for economically rationale local residents to engage in social or economic value adding productive activities.
	Average net monthly earnings (M3060827).	The level of earnings is also seen as being determined by the socio-economic conditions of the local place. Thus average monthly net earnings indicate in some extent the objective material quality of life characteristics of the local place.
Capabilities of individuals to utilize opportunities of external environment – personal life-ability: 'objective physical and productive QoL' domain (skills, health, education, etc.).	Level of education (M3110117).	Education level is one of the indicators, representing individuals' capabilities to utilize efficiently opportunities present in external socio-economic environment for adequate QoL. It is assumed: 'the lower the level of education the poorer objective productive QoL'.
	Number of health care professionals (M3140103).	Availability of health care personnel also represents objectively measured physical QoL of local residents. It is not direct indicator, but one traditionally used in QoL measurements. It is assumed: 'health care personnel are as a condition for better physical QoL'.
Self-reliance, faith and motivation, subjective self- evaluation of physical conditions and productivity, extent of human needs: 'subjective physical and productive QoL' domain.	Dwelling conditions (not to dark, light enough) (M3080211)	Indicator presents percentage of local residents' population evaluating their dwellings 'as not to dark, light enough'. The indicator is used as one indicating level of subjective physical and productive QoL. It is assumed, that self-perception of living in good dwelling conditions increases productivity and physical capabilities.
	Pollution, grime or other environmental problems (M3080211)	Pollution and environmental problems could be measured objectively and subjectively. Subjectively measured perception of local natural environment is used as one indicating physical conditions of local residents. It is assumed, that living in environment that is perceived as polluted decreases physical and productive QoL.
Utility of social life determined by objective environment conditions, i.e. expected individuals' moral and material contribution to the society: 'objective social and emotional QoL' domain.	Population national and international migration net migration (M3020101).	The indicator of net national and international migration is used as one presenting objective aspects of utility of social life at the local place. This data is seen as providing signals for local place population about social environment and potential contribution of others to the welfare of the society at the particular place.
	Criminal offences (M3170102).	Prevalence of criminals naturally reduces utility of social life. It is just one of many possible indicators that are used to grasp objective measures of social and emotional QoL at the local place.
Attitudes to utility of social life influenced by individuals' satisfaction and experience – 'subjective social and emotional QoL' domain (willingness to contribute to the society in material as well as moral terms).	Living area with crime and vandalism reputation (M3080211).	Evaluation of living area reputation is measured by surveying local residents. If residents rate their living environment as one known by crime and vandalism reputation, than their subjective social and emotional QoL is decreased. This decrease is expected due to negative image and respectively plausible unwillingness to cooperate in such community for its flourish and development.
	Noise from neighbours or from the street (M3080211).	Environmental noisiness is not a direct indicator to measure subjective social and emotional QoL. But, due to limited data available at the regional level, this indicator is used in order to cover QoL fields that are measured by subjective indicators.
Subjective perception and experience (perceived well-being) – individuals' life satisfaction: 'subjective perception of human needs fulfilment, subjective material QoL domain.	Households' ability to make ends meet (M3080210).	Subjectively measured ability to make households' ends meet represent subjectively perceived extent of human needs fulfilment. If ends of household's are being perceived as met easily, then it is presumed that human needs also are fulfilled and QoL is high.
	Ability to face unexpected financial expenses (M3080215).	Ability to face unexpected financial expenses corresponds to the ability to make ends meet. Self-evaluation and self-perception of being able to face unexpected financial expenses indicate high level of subjectively evaluated material QoL. Subjective evaluation is expected to be influenced by objective QoL characteristics.

* – Numeral codes provided in parentheses next to the indicators refer to particular tables in the Database of Indicators published in Statistics Lithuania internet site. <<http://db1.stat.gov.lt/statbank/default.asp?w=1260>>

Local place related quality of life in Lithuania regions

Figure 3 compares QoL measurements in 10 Lithuania Counties. The demographic structure of the Republic of Lithuania is following: Vilnius County, including capital city Vilnius, counts for 25.5% of 3.33 million total population (according to 2010 year data, provided by Statistics Lithuania). Kaunas County counts for 20%, Klaipeda and Siauliai counties – 11.3% and 10.3% respectively, Panevezys County – 8.4%. Alytus, Marijampole, Telsiai and Utena Counties are very comparable in the term of population. Each of them counts for 5% of Lithuania population. The smallest county is Taurage with 3.7% of total population.

It is observed at the first glance, that just some more significant QoL changes are noticeable during the 2008-2010 year period in just a few counties. QoL in Alytus County during the year 2008-2010 changed quite significantly in the subjectively evaluated ability to make ends meet. It increased significantly in the year 2009 (amounting 82.9% compared to Lithuania average) and decreased back to 57% compared to Lithuania average in the year 2010, it is the level of the year 2008. Subjectively measured material QoL was changing significantly also in other counties: Marijampole, Panevezys, Telsiai, Utena (Figure 3).

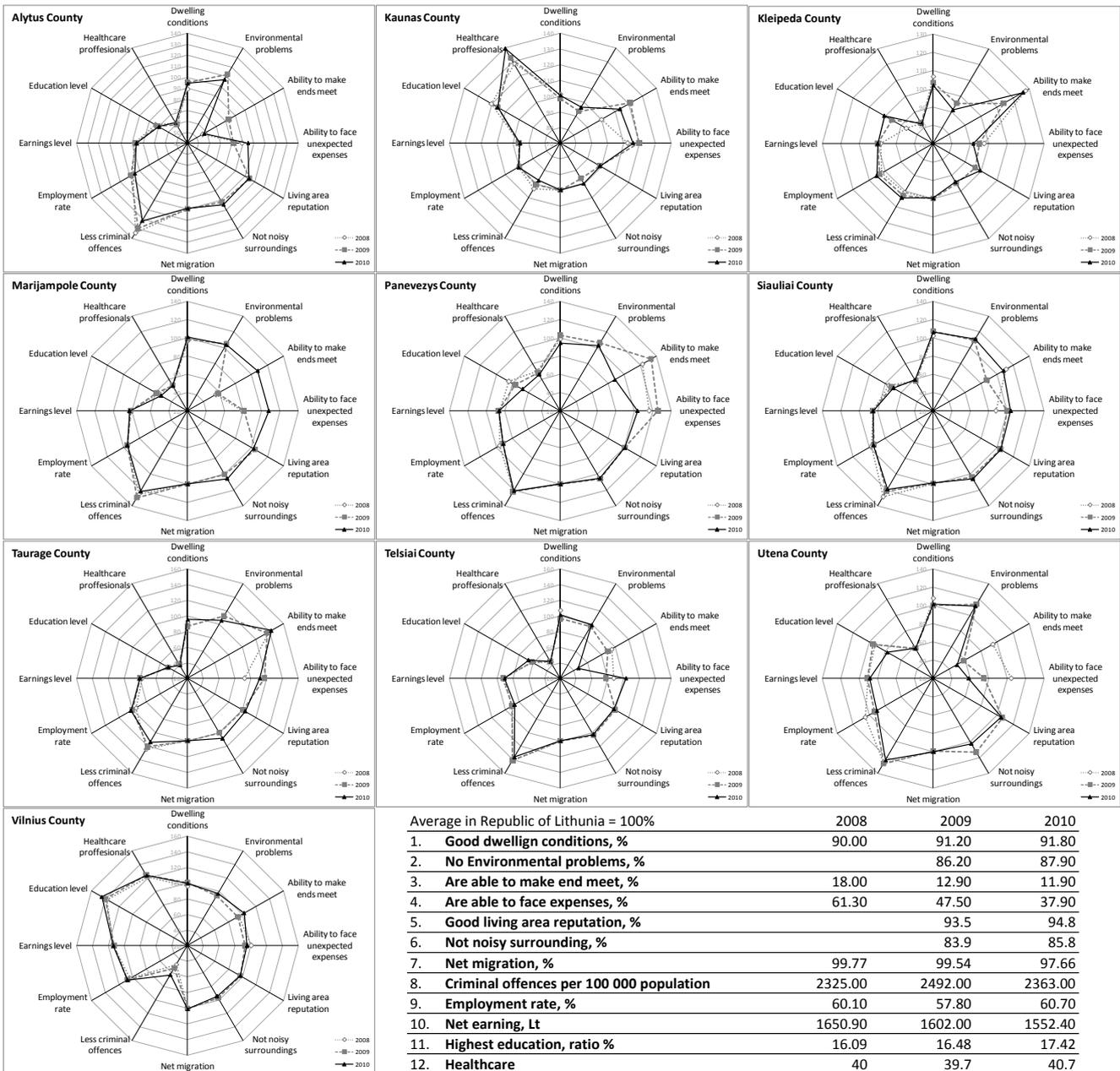


Figure 3. Local place related quality of life in Lithuania regions measured by selected indicators

Notes to Figure 3: Data source is Statistics Lithuania (internet access: <http://db1.stat.gov.lt/statbank/default.asp?w=1260>). All diagrams show particular data of certain regions (i.e. Lithuania counties) as compared to the average data of whole Republic

of Lithuania. Each year average of whole Republic of Lithuania is equated to 100%. Diagrams represent differences in percents from the country average. All average data in total numbers or percents as a proxy reference is presented in the included table. All variable data (except Employment) is for the year 2008-2010. Employment data is for the year 2009-2011. As it is indicated below some of the data series are not complete. **Employment** is described by the employment rate – an indicator expressed as a ratio (i.e. percentage) of the employed population of the 15-64 year age group to the total population of the same age. Male and female data is aggregated. **Earnings** variable is presented by average net monthly earnings in each county. **Education** level variable is presented by the ratio of total number of population with highest educational attainment (according to international ISCED classification) to the total population of the certain county. **Healthcare** variable indicates health care personnel (i.e. professional physicians) per 10 000 population. **Dwelling conditions** variable data shows percentage of population NOT reporting that their dwellings are too dark, nor light enough. Original raw data provided by Statistics Office as percentage of population living in households affected by deprivation in dwelling dimension is reversed by subtracting reported percentage from the 100%. This reversion is done in order to have all data comparable, i.e. showing positive cases in positive way (i.e. in upwards declination from the country's average which is equated in diagrams to 100%). The same notion goes also to the **Environmental problems** variable. Positively reversed data presents percentage of population NOT faced with the pollution, grime or other environmental problems in their living surroundings. Just 2009 and 2010 year data is provided in the data source. **Ability to make ends meet** variable shows percentage of the population perceiving themselves as able to make their ends meet easily, very easily and fairly easily. Remaining part of the population perceive themselves as able to make their ends meet with some difficulty, with difficulty or with great difficulty. Variable of **Ability to face unexpected financial expenses** is got by reversing to positive meanings share of the population that perceive themselves as unable to face unexpected financial expenses. After subtracting from 100% the data presents population share that perceive themselves as able to face unexpected financial expenses (Lithuania average is given in the included table; unexpected financial expenses are related to ones calculated by Statistics Office as the at-risk-of-poverty threshold for the year $n-2$ rounded by ± 5 per cent; in 2008, unexpected financial expenses equalled 450 Lt, in 2009 –570 Lt., in 2010 –720 Lit.). **Living area reputation** and **Surroundings noisiness** variables also are given as positive meanings, i.e. as share of population NOT reporting that they live in area with crime, violence or vandalism reputation, and NOT reporting that they dwell in surroundings with noise from neighbours or from the street. Just 2009 and 2010 year data is provided in the data source. **Net migration** variable is calculated as the ratio of the sum of total population and total net migration to the population total. Net migration total assumes both national and international migration. To retain measurements' comparability and aiming to reveal peculiarities of certain Lithuania regions, diagrams, as in cases of all other variables, show migration ratios of certain counties compared to average migration ratio of Republic of Lithuania. **Lesser number of criminal offences** variable total (shown in the included table) presents data on actually recorded criminal offences per 100 000 population. In order to display positive cases (i.e. smaller numbers of criminal offences) positively, comparisons to the Republic of Lithuania average are inversed by adding percentage value of positive difference (i.e. smaller than average number of criminal offences) to 100% and subtracting negative differences (i.e. higher numbers of criminal offences). It means that diagrams show the extent by which any certain Lithuania county differs in the average number of recorded criminal offences in opposite way: smaller than 100% numbers show that actual number of criminal offences is greater, while higher numbers present more quality of life favourable cases, i.e. with smaller actual numbers of recorded criminal offences.

Employment rate and net earnings level indicate objective material QoL. Collected data shows that average net earnings exceed average level (Lithuania average in 2010 year was 1 552 Lit) only in the biggest, i.e. Vilnius County, amounting 113.6% if compared to the Lithuania average level. Residents of Klaipeda County earn as average. All other counties do not exceed mean level. Marijampole and Taurage counties amount just near to 80% of the net earnings of the Lithuania average. On the other hand, subjectively evaluated material QoL describing indicators show that the number of residents perceiving them as able to make ends meet and able to face unexpected financial expenses exceeds average level namely in above just mentioned Marijampole and Taurage counties as well in other counties having lower QoL (compared to Lithuania average) measured by objectively evaluated material QoL. For example, the number of residents that felt able to make their ends meet decreased in Lithuania from 18 to 11.9% during the year 2008-2010. Respective population share, among residents of Taurage County, amounted to 25% in 2008 and 16.9% in the year 2010. While following overall (i.e. averaged) changes of living conditions perception and thus decreasing, the number of Taurage County residents that felt them as able to make ends meet remains equating to more than 140% if compared to Lithuania average. Other peculiarities could be traced in Figure 3.

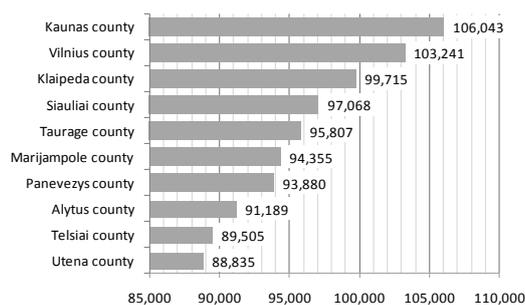


Figure 4. Not weighted average of quality of life measurements in Lithuania counties

Figure 4 summarizes the research with providing not weighted means of all measures that are get by comparing data of particular counties to the Lithuania average. The investigation done under the present research methodology let to conclude that the highest averaged quality of life is observed in Kaunas County, followed by Vilnius and Klaipeda counties, while Alytus, Telsiai and Utena counties being termed as having the least QoL that, if compared to the Lithuania average, is less to 10 and more percents.

Conclusions

The employment of the research methodology respecting QoL conceptualization that assumes quality of life as determined by external to the individuals objective and internal subjective evaluations as indicators in five domains (i.e. material, physical, productive, social and emotional QoL) enables to conclude that the conceptual framework and corresponding methodology, that is build using set of selected social indicators in each of QoL determining factor domains, are suitable and relevant to be used for QoL measurements.

Empirical measurements done using data about 10 Lithuania counties covering the year 2008-2010 provide with following conclusions: 1) Lithuania counties are most equal in subjectively measured social and emotional QoL (i.e. living area reputation and surrounding friendliness in terms of noisiness); 2) the major differences are observed when measuring QoL in objective and subjective material as well as in objective physical and productive and objective social and emotional QoL dimensions; 3) counties accounting higher objective material QoL life (measured by net earnings variable), i.e. biggest in the terms of population, are termed as having lower QoL in subjective material QoL and in objective social and emotional domain measured by the number of registered criminal offences. Some other conclusions also could be formulated.

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