

ANALYSIS OF THE OBJECTIVE INDICATORS OF QUALITY OF LIFE IN HAJDÚ-BIHAR COUNTY

Anett Sőrés & Károly Pető

University of Debrecen, Faculty of Applied Economics and Rural Development 4032 Debrecen Böszörmény út 138.

Abstract: The rate of unemployment in Hajdú-Bihar County is several percent higher than the national average and the actual number of unemployed people is the highest, resulting in considerable social problems. The majority of families living under the minimum subsistence level cannot cover their housing maintenance costs. These costs include the rents of tenement flats, public charges, water, electricity, gas and district heating charges. Cutting the number of unemployed people and stimulating economic activity is a high priority. Important tools towards achieving these goals include the promotion of non-agricultural activities by households engaged in agriculture, incentives for rural micro-enterprises, the development of rural and agro-tourism and support for traditional arts and crafts. As for general subjective well-being, although its average value is positive, merely 50% of the population is contented. Naturally it does not mean that we are unhappy. 4 respondents out of 5 claim that they are rather happy. This may suggest that the picture is not so pessimistic as it is revealed by questions about living conditions.

Key words: Unemployment, Quality of life, Rural development

I. Introduction

On what bases can a nation's quality of life be assessed, and in making such an assessment, how should one gauge the current state of affairs and developmental history of e.g. such a relatively small environment as that of Hajdú-Bihar County? Are conclusions from such an assessment drawn unconsciously on the basis of findings with the help of a mathematical formula or is a single "indicator" simply chosen (e.g. income, number of friends, professional accolades) to help us in the assessment of quality of life?

We might agree that it is much easier to answer the question as to why one even bothers measuring the quality of life, than to find an answer to the question as to how this should be measured. Accordingly, one should perhaps begin by answering the easier question. Quality of life should be measured because life is much more than survival. On the one hand, any improvement of public health is judged in terms of any increase in a population's average lifespan, while on the other hand, it is equally judged in terms of the improvement of overall life quality (e.g. quality of palliative care, improvement in the ability to of health care professionals to function properly).

Today, policy-makers have started to realize that the effectiveness of economic and social policies preaching slogans, such as "job creation", "GDP growth" and "motorway construction" to alleviate the resentment at their failure to improve the nation's quality of life are running out. Increasingly, Hungarians feel that more meaningful decisions will also be needed to make them contented enough to give their votes to any political party, than has been the case since 1990. But what does this actually mean? To

answer the question, many use the measuring sticks of life quality and contentment to recalibrate political for the future. In other words, the level of the quality of life of the citizens of a nation, and especially its improvement, is the gauge by which one should distinguish between good and bad governance. The way forward, which leads governments responsible for the realization of the "public good" by adopting quality of life-centred economic and social policies, appear necessary. Of late, interest in the analysis of life quality has increased and the idea of life quality-centred planning has already emerged in Hungarian public administration. (Kovács-Horkay-Michalkó, 2006)

II. Assessment of the quality of life

Research on well-being consistently reveals that the characteristics and resources valued by society correlate with happiness. For example, marriage (Mastekaasa, 1994), a comfortable income (Diener & Biswas-Diener, 2002), superior mental health (Koivumaa-Honkanen et al., 2004), and a long life (Danner, Snowdon, & Friesen, 2001) all appear as factors in reports of high happiness levels. Such associations between desirable life outcomes and happiness have led most investigators to assume that success makes people happy. This assumption can be found throughout the literature in this area. For example, Diener, Suh, Lucas, and Smith (1999) reviewed the correlations between happiness and a variety of resources, desirable characteristics, and favourable life circumstances. (Diener, King, Lyubomirsky, 2005)

In this decade, empirical studies related to subjective well-being have been made with particular attention paid to

developing economies. Some of the key publications on this topic include the work of *Graham and Pettinato* (2001, 2002), *Gough and McGregor* (2007), *Kingdon and Knight* (2006), *Rojas* (2008) and *Pradhan and Ravallion* (2000). When dealing with rural areas in emerging economies, studies must take into account differences in the determinants of subjective well-being between people from developed and developing economies.

There are subjective and objective sides in life quality researches. The two significant life quality research models are the Scandinavian, starting with the availability of resources and their possession, thus laying emphasis on objective factors; and the American, which rather finds subjective perception and evaluation important. A kind of mixture of these two is the life quality approach used by Erik Allart. Following Maslow's model, he also created a hierarchy of needs and distinguished 3 levels:

"Having, loving, being" (material–environmental and social needs and needs for personal development as well). Moreover, he differentiated objective factors and the related subjective attitudes on all the three levels. In the present study the level of "having" is the most relevant, so objective and subjective indicators will be highlighted at this level:

- Objective: objective measurement of the standard of living and environmental conditions
- Subjective: contentment with the standard of living, the feeling of contentment (*Utasi, 2007*)

Inglehart and Klingemann claim that the communist past of certain countries or their democratic conditions looking back to previous traditions are significant factors in the assessment of the subjective quality of life.

In formerly socialist countries, the evaluation of individual welfare is lower than in traditional democracies; moreover, it is often far below the level of those of presently communist systems. *Veenhoven* (2003) finds the reasons for this state of affairs in the fact that the more equal distribution of happiness is rather characteristic of those countries where income differences are low and social security is high. *Lengyel and Hegedűs* (2002) suggest that the economic crisis and the ensuing political transformation in itself exerted a negative influence on citizens' well-being in post-socialist countries. This situation has been further aggravated by – immediately or at least quickly developing – disappointments in the fulfilment of expectations related to the transformation, decreasing social security and its concomitant uncertainty of existence. (*Inglehart – Klingemann, 2000*)

1. Factors influencing the quality of life

The precise determination of our quality of life and living standard is a complicated task. However, the following figure (*Figure 1.*) attempts to summarize those areas (based on existing research findings) which exert the greatest influences on our living standard.

The first highlighted area is health. Unfortunately, Hungary lags behind the European Union in this respect. In

the past three decades, the health of the Hungarian has population deteriorated significantly and showed a markedly unfavourable picture in international comparison.

The physical or man-built environment primarily includes infrastructure and housing circumstances. The relevant viewpoints in their assessment are the accessibility of residences, the reliability and headway of transport modes, the quality of road networks, public lighting, coverage of telephone network and shopping facilities. Personal relationships and security must also be mentioned, as these two factors are closely linked. Personal relationships primarily refer to the family and security provided by it. However, priority will be given to individuals' secure livelihood as well. Families' secure livelihood is determined by the degrees of accumulated wealth and whether stable job opportunities are available for family members in the vicinity of their residences, in accordance with their qualifications and skills and also, of course, by the public security of their residential area.

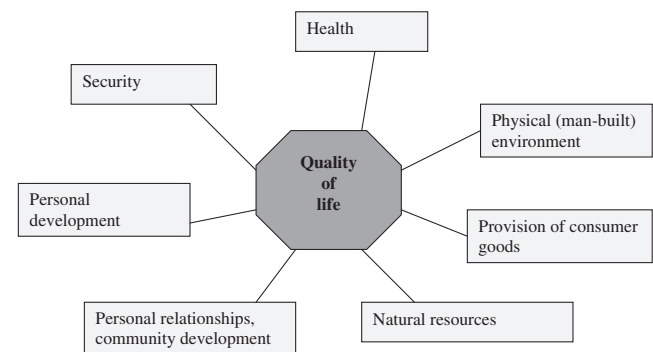


Figure 1. Factors influencing the quality of life (Source: Author's own work)

2. Contentment with the quality of life in Hungary

In Hungary, the rate of contented citizens lags well behind the average measured in all the EU member states (78%) by the Eubarometer. The positive attitude of Denmark (98%), Luxemburg (96%), Sweden (96%), the Netherlands (95%), Finland (95%) and the United Kingdom (91%) are worth mentioning. In the spring of 2009, 56% of the respondents in Greece were pessimistic, but their rate decreased to 42% within 6 months, whereas the rate of contented citizens grew from 44% to 58%. (*Eurobarometer 72, 2010*)

Almost all the Hungarian respondents claim that the state of economy (97%) and employment are definitely poor (96%). Somewhat fewer people think that the state of the world economy (77%) and the European economy (76%) are far from being ideal. Three quarters of the respondents worry about the state of the environment as well.

EU citizens can compare the state of their countries with that of the European Union. As for Hungarians (96%), the states of our economy and labour market are worse than in EU countries in general (2009). The same percentage of

respondents say the cost of living also tends to be unfavourable. Almost the same amount of people think that the quality of life (95%), energy prices (92%) and the state of the environment (81%) show a much worse picture in our country than in other EU member states. Compared to the above respondents, the number of those who claim that the life of Hungarian children could be better if they immigrated to other countries (31%) might seem to be low. This statement is not accepted by 45% of Hungarians and one-fifth of the respondents believe that the successful life of the youngest generation abroad depends on several other factors as well. (Eurobarometer 72, 2010)

Interestingly, in the light of the above, young people between the ages of 15–24 are included in the largest range (67%), or those who feel fine in their current situation. The least happy are people between 40–54: 70% of them thinks that their current circumstances are far from being ideal. This means that on average, approximately double the number of the current domestic income would be needed for families to have no worries – by their own admission. Average respondents are rather contented with their jobs than with their income, whereas contentment with their life standard is between the two. As for general subjective contentment, although its average value is positive, merely 50% of the population is contented. Naturally, this does not mean that we are unhappy. 4 respondents out of 5 claim that they are rather happy. This may suggest that the picture is not as pessimistic as is revealed in their responses about living conditions. (Utasi, 2007)

III. location of the studied county

Hajdú-Bihar County is located in the northern frontier of the North-Great Plain Region, including 82 settlements, with its population living in 21 towns and 61 townships (Figure 2).



Figure 2. Counties in Hungary (Source: Central Statistical Office)

To expedite efficient operation, the settlements of the country have formed 9 small regions. Their natural endowments are rich; they are invaluable in respect of nature protection, recreation and environmental protection.

The county (Figure 3) plays a leading role in the Eastern-Hungarian region. Its county seat is Debrecen, which has

been the centre of scientific and cultural life of the Great Hungarian Plain and the East Tisza Region for centuries. Debrecen is the economic, intellectual and cultural centre of North-eastern Hungary, as well as a favoured destination for tourists.

Browsing central statistical data and databases of questionnaire surveys, it immediately becomes evident that data in the region actually show improvement in some areas; however, they do not reveal the decrease in inequality. As it is well-known, inequality (wealth and income differences, differences in the supply and demand for different types of work) may be one of the primary reasons of discontentment. Hajdú-Bihar County is a good example for regional inequality, as several disadvantageous and cumulatively disadvantageous small regions and settlements are located here. However, economically and socially speaking, a number of settlements feature the characteristics of developed towns.



Figure 3. Hajdú-Bihar County

IV. Objective indicators studied in Hajdú-Bihar County

In the analysis of living standard and living conditions, objective indicators include primarily earnings, labour-market status, the availability of consumer goods and other similar, material indicators. In general, per capita GDP and various indices, mainly those formed from national economic indicators, may also be analysed.

The present study investigates solely objective indicators, as subjective ones (which may be mainly determined from questionnaires) will be published as part of a doctoral dissertation in a future study.

1. The varying number of population

In Europe, the major reason behind critical demographic conditions is not the diminution, but rather the ageing of, the population. Consequently, the burden of maintenance grows gradually and cyclically. The cyclic character is induced from generation to generation by the cyclic life course of the

“baby-boom” generation born after World War II. These demographic conditions are general throughout Europe (also in Hungary); and although the levels of ageing are markedly different, in sum, they are extremely high in certain member states. The core of the process of ageing is the transformation of the entire age structure, a shift towards an elderly population, i.e. the elongation of the age tree. All these shatter the existing economic, social and welfare systems substantially.

Demographic processes followed a similar trend in Hajdú-Bihar, as well. According to data from 2007, 543,802 people live in the county. The figure below (Figure 4.) demonstrates that the population has dropped in the past 10 years. This downward tendency is not merely characteristic of Hajdú-Bihar County, but unfortunately, of the whole country.

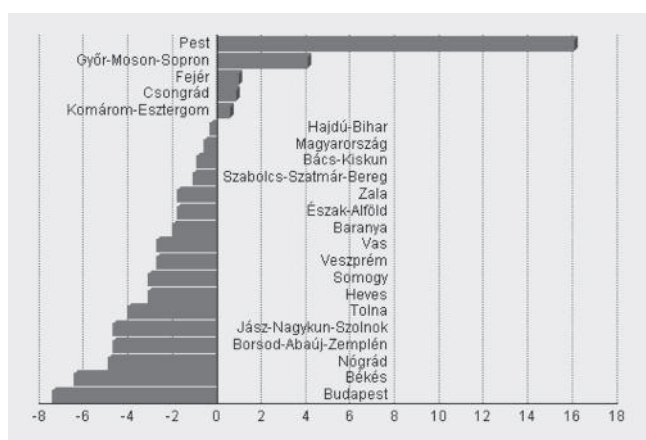


Figure 4. Changes in population in the past 10 years
Source: KSH TSTAR, 2009

An ageing society poses a grave problem for social security schemes and age exerts a significant influence on the quality of life, as well. The Eurobarometer concludes that people over 50 are the most contented with their quality of life.

2. Labour market

Out of the objective indicators of life quality, our study focuses primarily on the labour market, as it is a major problem not only in the country as a whole, but particularly in Hajdú-Bihar County. Recalling the data of the Eurobarometer 72 (2009) survey, it can be stated that unemployment is the primary problem for the Hungarian population. Access to jobs and adequate employment is essential for contentment and positive assessment of life quality.

Table 1. General features of the labour market

County	Rate of unemployment	Unemployed people	Employed people	Inactive people	Rate of employment	Rate of activity
Hajdú-Bihar	13.39 %	26680	172538	212191	41.9%	48.4%

(Source: Public Employment Service)

The summary of the general features of the labour market in Hajdú-Bihar County are demonstrated in Table 1. This will bring us to the next point, the analysis of selected indicators, as compared to other counties.

In Hajdú-Bihar County, the rate of agricultural employees is high; we are the fourth as compared to other counties. This is not surprising, as the Great Hungarian Plain has good quality and spacious production areas. This is a serious problem in the present economic situation. The significance of agriculture has diminished and production has fallen, as is the case in other economic sectors. More significantly, agriculture as a sector has lost its crucial role in county employment. Unfortunately, agriculture fails to provide a secure source of personal income. It has largely become a kind of supplementary activity and it proves to be more significant for self-sufficient farms. Therefore, the III. pillar of the New Hungary Rural Development Program is of great significance, as it strives to improve the quality of rural life, focuses on the diversification of rural economy and provides the necessary funds for such activities.

To relieve employment stress and to extend earning opportunities, rural economic potentials are to be enhanced which contribute to the improvement of employment by creating jobs beyond agriculture in rural areas. The most significant means towards achieving this goal include the promotion of non-agricultural activities by households engaged in agriculture, incentives for rural micro-enterprises, the development of rural and agro-tourism, traditional arts and crafts.

If the rate of unemployment is investigated on county level, unfortunately we take a leading position. The county average was 13.39 % in 2009 (Figure 5.). This is due to the economic crisis, which also affected our country. The most conspicuous sign of the crisis was and still is soaring unemployment as a result of increased company wind ups and cost cuts expected from lay-offs.

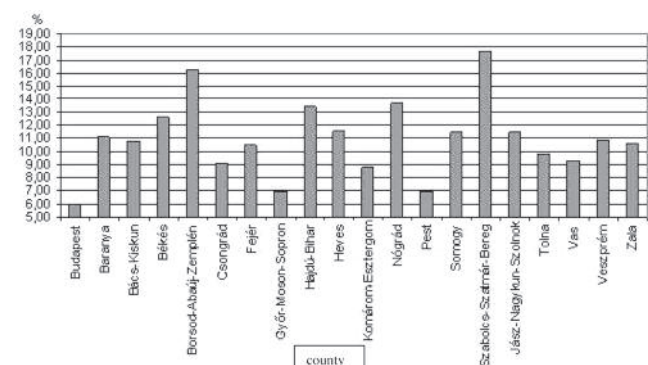


Figure 5. Rate of unemployment on county level (2009) (Source: Authors' own work based on ÁFSZ data)

According to the definition used by the International Labour Organization (ILO), the rate of unemployment published recently by KSH is 11.8%, showing national data for the 15–74 year-old population for March 2010, on the basis of a national survey. As compared to data published a month earlier, this data shows an increase of 0.4% and exceeds the

2009 level by 2.1%. (KSH, 2010) The rate of unemployment in Hajdú-Bihar County is several percent higher than the national tendency. The reason for this trend lies in the fact that both Hungarian and international capital arrives here in lower than average volumes, so the number of unemployed people (Figure 6.) is the highest here and in the northern counties, resulting in critical social problems. These social problems also negatively influence the assessment of life quality.

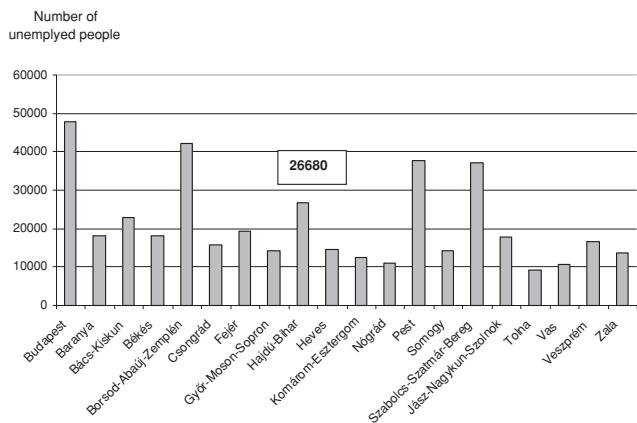


Figure 6. Number of unemployed people on county level (2009) (Source: Authors' own work based on ÁFSZ data)

Figure 7. presents one of the most critical problems on the labour market: the high rate of inactive population. This category includes people with a partial incapacity for work who suffer from physical or mental deficiencies or whose opportunities to find employment decreased radically after medical rehabilitation. A focal problem is that equal opportunities are not ensured for disabled pupils/students in education and training either. In Hajdú-Bihar County, the rate of people incapable of working is approximately 8–10% of those registered as being unemployed, whereas the rate of offers for jobs which would be appropriate for them is merely 1–2%, mostly in the social sphere. Support opportunities are further restricted by their low willingness to receive training and the fact that they need special forms of cooperation from the employment organization. They rather prefer easy physical work and the Piremon Non-profit Ltd. plays a significant role in their employment. These people have to cope not only with the loss of income as a result of their unemployment, but with social inclusion and their disabilities as well. This everyday struggle may induce the negative assessment of their life quality.

The group of inactive people also includes dependants who generally do not have earnings or income and their living is provided by private individuals or institutions. Numerically, this means 212,191 people, i.e. 39% of the population in the county. The rate of activity is not any better, it is merely 48%. The formation of this ratio is largely due to the gypsy population. Low school qualifications are the key factors behind the social and

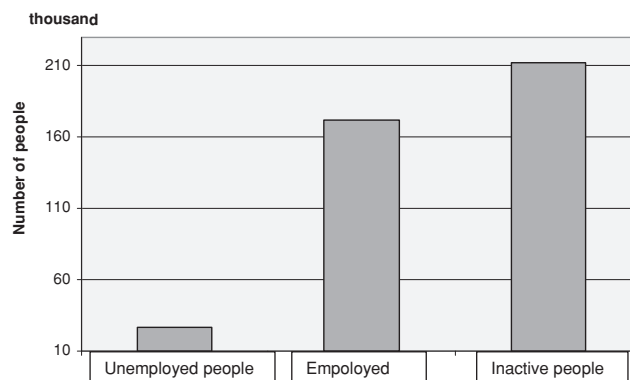


Figure 7. Selected labour market indicators in Hajdú-Bihar County (2009) Source: Authors' own work based on ÁFSZ data

economic backwardness of the Roma population; therefore, short and long term programs targeting the improvement of conditions for gypsies identify education as the most highlighted priority.

3. Income

GDP is the most often used macro-economic indicator in every country and international business organization. A good example for this is that economic, social and territorial cohesion policies (i.e. The Structural Funds) are used for the classification of regions receiving EU co-financing on the basis of GDP per capita.

However, GDP has been increasingly and harshly criticized as to whether it is capable of correctly representing the social-economic conditions of territories and regions.

One should remember that the formation of GDP per capita in some regions might be affected by commuters. The inflow of workers can raise production to a level which would be impossible to reach through the local active population. Consequently, GDP per capita can be overestimated in areas attracting labour force and in those ones where labour outflows, underestimated.

Table 2. Formation of basic wages and earnings in 2010

	Basic wages (HUF/person/month)				Earnings (HUF/person/month)			
	physical	intellectual	man	woman	physical	intellectual	man	woman
Hajdú-Bihar County	98865	183747	142622	135041	118320	227844	177028	162612
Hungary	108519	226530	176907	157373	132415	275025	218041	188147

(Source: Authors' own work)

Income and material goods predominantly determine the quality of life. Without money, it is difficult to satisfy our demands. Statistical data show and long years' experience suggest, not surprisingly, that the earnings of those living in the nation's capital are much higher than the national average. Szabolcs-Szatmár-Bereg County ranks last, with its income only 65% of those living in Budapest. Moreover, this

figure is significantly lower than average per capita GDP. The analysis of per capita GDP shows that the situation is somewhat better in Hajdú-Bihar County (*Figure 10.*), as the county exceeds the regional value, but basic wages and monthly earnings (*Table 2.*) lag behind the national average. An intellectual worker earns 227,844 HUF in Hajdú-Bihar County, whereas the national average is almost 50. 000 HUF higher. The difference between the earnings of men and women producing equal quality work also raises various questions. This constitutes discrimination, which induces discontentment, and discontentment triggers the negative assessment of life quality.

4. State of health

Our state of health clearly affects our quality of life and relationships. The following factors influence our state of health fundamentally:

1. Individual factors

- Congenital genetic endowments
- Acquired characteristics
- Age, gender

2. Lifestyle, way of life

- Dietary habits
- Physical activity
- Consumption of luxury products

3. Living environment

- Physical characteristics of built environment (noise, radiation)
- Town-village
- Availability of services

4. Working environment

- Physical and psychological stress at work
- Physical factors
- Chemical factors

5. Social and economic factors

- Migration, unemployment, impoverishment, crowded residential areas without proper hygienic conditions
- Globalization of food industry

6. Health care and social system

- Quality of health care and availability of medicine
- Availability of care

The health of the population exerts a fundamental influence on the quality of human resources. It has already been established that Hajdú-Bihar County, similarly to the whole country, has an ageing social structure and on the grounds of current demographic tendencies the health care system faces increasing challenges in the future.

Due to gradually increasing environmental loading and generally characteristic unhealthy lifestyle the number of inhabitants affected by the “ills of civilization” (cardiovascular diseases, diabetes, malignant tumours etc.) is permanently high. Similarly to the ills of civilization, addictions affecting increasingly wide circles of the population also cause crucial problems.

Although in Hajdú-Bihar County, the number of live births is higher (10.2/thousand inhabitant) and mortality is lower (12,300 inhabitants) than in the North-Plain region or in Hungary, the shrinking of the (natural) population is typical, numbering -2,000 inhabitants according to data published in 2009. Most deaths in the country are caused – both in men and women – by circulatory diseases. Mortality caused by ischaemic heart diseases here is more unfavourable than in the country as a whole. The second most frequent cause of mortality in both sexes are cancers; the third most common cause for men is accidents or suicide, while this is diseases of the digestive tract for women.

It is noteworthy in the analysis of general mortality in the region that the Püspökladány and Hajdúhadház sub-region, belonging to the catchment area of Kenézy Hospital, located in Debrecen, is highly at risk. The results of Hajdú-Bihar County in diminishing mortality are outstanding because, in terms of employment, education, earnings, family structure and the high level of Roma population, it belongs to the category of less-favoured areas.

(Information on the health of the population in the county, 2009)

V. Conclusions and recommendations

The above-mentioned data suggest that politics and social sciences should really focus on the harmonic, long-term improvement of life quality and the development of personalities capable of creating real human relationships and evolving communities.

The rate of unemployment in Hajdú-Bihar County is several percent higher than the value of the national tendency. The reason lies in the fact that both Hungarian and foreign capital is channelled here in a lower than average quantity, therefore the number of unemployed people (*Figure 8.*) is the highest here and in the northern counties, resulting in considerable social problems. To cut the number of unemployed people and to stimulate the activity of inactive labour force the following measures are to be taken:

- incentives to seek gainful employment,
- development of job-hunting services,
- improvement of employability for disadvantaged people,
- incentives for access to employment,
- preservation of employment activity,
- development of an integrated employment and social service-provider system,
- support for life-long learning.

As already mentioned before, the high rate of inactive people is a crucial problem. Besides the deficiencies of their qualifications, the key reasons of the underemployment in the roma population are the following:

- Drawbacks in settlements (the majority of romas live in small settlements)
- Lifestyle strategies originating from the poverty trap (welfare policy supports often exceed the volume of earnings, there is no motivation to work)
- Newly established enterprises primarily prefer qualified workforce

- Employment discrimination is continuously present, but difficult to prove.

The analysis presented above suggests the clear and evident priority that Roma children should graduate from secondary schools to have opportunities in the labour market. Another solution could be to link the payment of family allowance to children's school attendance or to spend part of the allowance to cover the costs of schooling or to receive some allowances in kind (transport, catering, hostel accommodation in senior classes). The driving force of these measures is worth investigating.

The majority of families living under the minimum subsistence level cannot cover their maintenance costs for housing. These costs include the rents of tenement flats, public charges, water, electricity, gas and district heating charges but these fail to cover the actual running expenses. The Law on Social Welfare states that the amount of support shall be a contribution to the preservation of dwelling conditions. In practice, this amount is excessively low. A national, guaranteed and uniform system of housing allowance should be introduced in the framework of the Law on Social Welfare.

The alleviation of employment stress in rural areas, the expansion of income potentials can merely be realized through strengthening rural economic potentials which may improve employment by creating jobs outside agriculture in rural areas. Highly important tools in achieving these goals include the promotion of non-agricultural activities by households engaged in agriculture, incentives for rural micro-enterprises, the development of rural and agro-tourism, traditional arts and crafts.

Furthermore, the competitiveness of the investigated county is to be enhanced, local economy is to be invigorated, local communities should be prepared for the acquisition of EU and other available funds which expedite the support of sustainable social, environmental and economic development.

References

ÁFSZ (2009): Állami Foglalkoztatási Szolgálat http://www.afsz.hu/engine.aspx?page=full_AFSZ_KOZOS_Statiztika

Danner, D. D., Snowdon, D. A., Friesen, W. V. (2001). Positive emotions in early life and longevity: Findings from the nun study. *Journal of Personality and Social Psychology*, 80, 804–813.

Diener, E., Biswas-Diener, R. (2002). Will money increase subjective well-being? *Social Indicators Research*, 57, 119–169.

Diener, E., King, L., Lyubomirsky, S. (2005): The Benefits of Frequent Positive Affect: Does Happiness Lead to Success? *Psychological Bulletin*. 2005, Vol. 131, No. 6, 803–855

Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*, 1999, Vol. 125, No. 2, 276–302.

Eurobarometer 72 (2009): http://ec.europa.eu/public_opinion/archives/eb/eb72/eb72_hu_hu_nat.pdf

Graham, C. and Pettinato, S. (2001): Happiness, Markets and Democracy: Latin America in Comparative Perspective. *Journal of Happiness Studies*, 2, 2001, 237–268.

Graham, C. and Pettinato, S. (2002): Frustrated achievers: winners, losers and subjective wellbeing in new market economies. *Journal of Development Studies*, 38(4), 2002, 100–140.

Gough, I. and McGregor, A. (2007): Wellbeing in developing countries: From theory to research. Cambridge: Cambridge University Press. 259–280

Inglehart, R. – Klingemann, H.-D. (2000): Genes, Culture, Democracy and Happiness. In: Diener, E. – Suh, E. M. (eds.): *Subjective Well-Being across Cultures*. Cambridge MA, MIT Press, 165–183.

Kingdon, G. and Knight, J. (2006): "Subjective well-being poverty vs. Income poverty and capabilities poverty?," *Journal of Development Studies*, 42(7), 1199–1224.

Koivumaa-Honkanen, H., Koskenvuo, M., Honkanen, R. J., Viinamaki, H., Heikkilae, K., & Kaprio, J. (2004). Life dissatisfaction and subsequent work disability in an 11-year follow-up. *Psychological Medicine*, 34, 221–228.

Kovács B. – Horkay N. – Michalkó G. (2006): A turizmusall összefüggő életminőség-index kidolgozásának alapjai. *Turizmus Bulletin X. évf. 3. szám*

KSH (2010): Központi Statisztikai Hivatal <http://portal.ksh.hu/pls/ksh/docs/hun/xftp/gyor/nep/nep21002.pdf>

Lengyel Gy. – Hegedűs R. (2002): A szubjektív jólét objektív tényezői nemzetközi összehasonlításban. In: Lengyel György (szerk.): *Indikátorok és elemzések. Műhelytanulmányok a társadalmi jelzőszámok témaköréből*. Budapest, BKÁE

Mastekaasa, A. (1994). Marital status, distress, and well-being: An international comparison. *Journal of Comparative Family Studies*, 25, 183–205.

Rojas, M. (2008): Experienced Poverty and Income Poverty in Mexico: A Subjective Well-Being Approach. *World Development*, 36(6), 1078–1093.

Pradhan, M. and Ravallion, M. (2000) Measuring poverty using qualitative perceptions of consumption adequacy. *The Review of Economics and Statistics*, 82(3), 462–471.

Tájékoztató a megye lakosságának egészségi állapotáról, az egészségromlást előidéző okokról, a szükséges tennivalókról (2009): A Hajdú-Bihar megye közgyűlés elnöke, Debrecen

Utasi Á. (szerk.) (2007): *Az életminőség feltételei*. MTA Politikai Tudományok Intézete. Budapest. pp. 251-276.

Veenhoven, R. (2003): Happiness. *The Psychologist*, March 2003.