

DECISION MAKING AND QUALITY OF LIFE

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Abstract:

Evaluation of the economic performance of countries in the globalization process and decision making on the future development required in respect of various macroeconomic analysis and forecast of the economy to take into account more and more new alternative indicators for measuring economic development. If we want to fill these needs including social conditions and quality of life in synthetic analysis, it is necessary to develop a comprehensive indicator. To create such a comprehensive indicator it must be taken into account that the approach is based on aggregation of several major indices in order to include wide range of units, which affect what indicator intends to measure (human development, quality of life, well-being, environmental sustainability respectively other quality indicators of people's lives). In this paper we describe newly established alternative measurement that take into account the quality of life and allow to aggregate results in decision-making and economic policies of selected countries and thus affect the quality of life of individuals.

Keywords: decision making, economic growth, quality of life

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1. INTRODUCTION

Improving the quality of life and well-being is the aim of each government. But what regarded as crucial in the context of economic policy for creating the qualitative conditions that lead to economic growth and how these qualitative factors measured?

The first step is that the economic policies of individual countries create conditions for sustainable and qualitative economic growth and development in terms of the growing global competition as well as created room for the implementation of new methods of measuring qualitative development.

The necessity and reflect on the future are even more important that the world economy is still floundering in the aftermath of devastating crisis. Hesitant recovery, high unemployment, unprecedented volatility in financial markets and public debt, which are of the highest level, are forcing to think about defining the necessary policy responses in the long run.

Realizing the many of factors and qualitative aspects of economic growth is the first step to the awareness that economic policy can not taken into account in assessing the economy only economic growth rate, which can be quantitatively measured, but must also take into account a number of factors non-economic nature, which contribute not only to economic growth, but also a better quality of life of individuals and society.

Change in the qualitative shift of perception and measurement of economic growth does not mean that the GDP indicator should disappear, because they still provide answers to many important questions, but should be work on the development of the statistical system that complements measures of market activities focusing on the human dimension and the dimension that affect a person's life quality.

In the current situation it is time to create a measurement system to better reflect the changes that are characteristic of growth in modern economies. Growing share of manufacturing and services increasingly complex products makes the measurement of output and economic performance becomes much more difficult than in the past.

Currently, there are many products whose quality is a complex, multidimensional and subject to rapid changes. In some countries and some sectors increase output is more a matter of improving the quality of goods than it consumes large quantities.

Capturing quality change is a huge challenge, but it is very important for measuring real income, real consumption and especially for some of the key determinants of measuring human well-being.

It should be noted, however, that indicators for measuring and comparison of the qualitative and quantitative sites of economic growth between countries are not created in order to bragging, and determine the best, happiest, healthiest country or the worst, poorest, but rather are created to define common objectives and measure the contribution of each country to achieve these societal goals.

They should shape a comprehensive picture of well-being across economies through conditions of human life, which is reflected through the physical conditions and quality of life. At the same time, these indicators respond to the needs of citizens better informed about their welfare and needs of policy makers a clearer picture of the economic, but also social development.

Many economists are actively addressed and engaged in researching alternative methods and performance indicators economies not only in quantitative, but mainly qualitative terms.

Since the middle of last century are being created various alternative approaches that try to either extend the existing GDP indicator, or they attempt to create a completely new indication, which would help allay the previously mentioned shortcomings. Several authors refer to these variables as "alternatives to GDP", respectively "alternative indicators" (in this work we use the second of these terms). Created indicators represent an interesting contribution to the debate regarding the possible measurement methodologies.

In this article we will mainly deal with the use of better life index and the potential use in decision-making on the economic policy within the selected country.

2. BETTER LIFE INDEX

In 21 century, there are many debates on how to measure well-being of society and the individual, and thus the qualitative dimension of economic growth. Since 1961, when it OECD was founded, it helps governments design better policies to improve the lives of its citizens. OECD has recently joined the discussions on the measurement of well-being. Based on this experience there has been set out 11 dimensions that reflect what the OECD considers that is essential.

Each dimension is based on one to three specific parameters. Major shifts in alternative indicators are the last dimensions, which try to express how current material living conditions and the quality of life maintains the state of well-being over time.

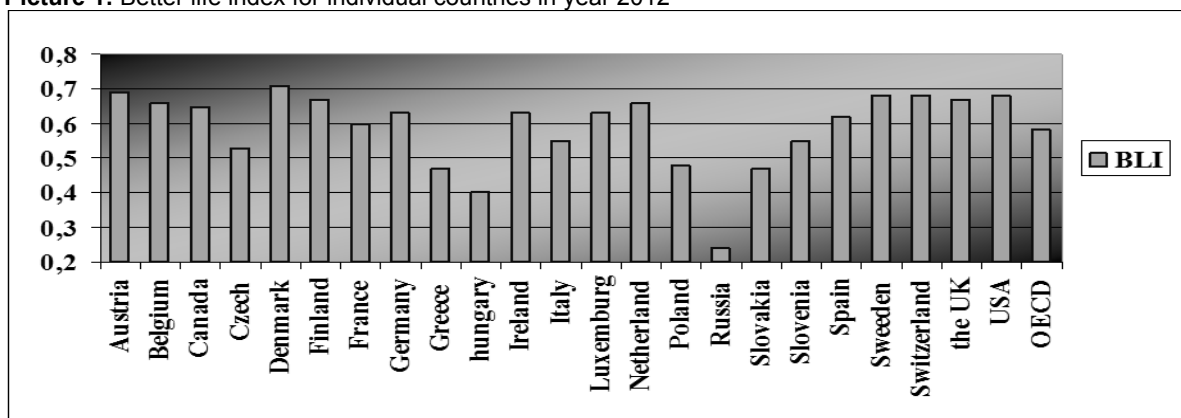
Indicators of individual dimensions are selected on the basis of several statistical criteria of relevance (e.g. political relevance) and data quality (possibility of prediction, coverage, timeliness, comparability between countries, etc.), and after consultation with the OECD countries.

Of course, before calculating the index of each dimension we need to normalize the values of each indicator, as this index well as collects many indicators expressed in very different units. If we compare the aggregate values expressed in different units, their values must be standardized. Standardization be made under standard formula that converts the original value of the number of indicators that vary between 0 (the worst possible outcome) and 1 (for the best possible result).

For calculating the value of better life index we must individual indicators within each dimension aggregate, since each dimension of well-being is measured one to three indicators. Within each dimension is the order of the indicators weighted by the number of indicators per dimension. If you perform the procedures preceding steps of calculation, it remains only to assign weight to each dimension, which is divided by the sum of weights, multiplied by the weight of the index for dimension and all thus calculated dimension count.

On the next page we can see on figure 1 that the value of better life index in 2012 varies between countries from the level of 0.24 in Russia after 0.71 in Denmark. OECD average stands at 0.58. The value of better life of Slovak republic reaches a value of 0.47, we can conclude that neither the OECD average. So that we can on the basis of this index to find out what the Slovak republic is lagging behind compared to other countries, we need to evaluate single sub-indices separately, as the resulting index says nothing about the values at which levels higher or lower. The final index is determined therefore only country ranking and other explanatory allowed.

Picture 1: Better life index for individual countries in year 2012

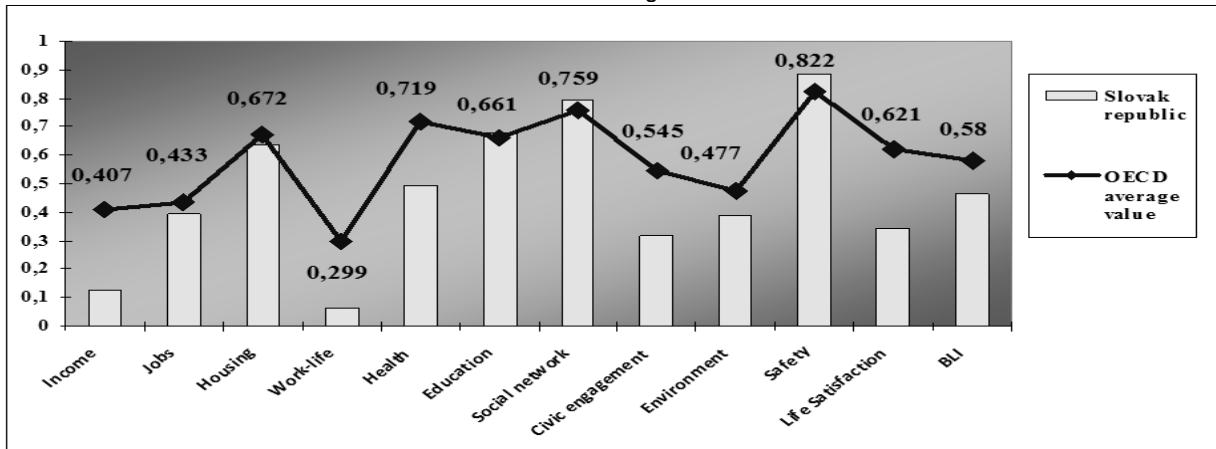


Source: OECD, better life index

Looking at the single sub-indices in the valuation of scales equal to 1, we can conclude that Slovakia lags behind in almost all areas as the OECD average. Only in two dimensions, out of 11, Slovak

Republic has a higher value than the average, and the dimension of personal safety and social relations. The rest of their areas are well below the OECD average, as shown in figure 2.

Picture 2: Better life index for Slovakia and the OECD average value



Source: OECD, better life index

Table 1: Comparison of BLI with extended BLI

Country	BLI	Extende BLI	Country	BLI	Extende BLI
Australia	0,68	0,67	Korea	0,53	0,46
Austria	0,69	0,62	Luxembourg	0,63	0,56
Belgium	0,66	0,59	Mexico	0,35	0,22
Brazil	0,30	0,17	Netherlands	0,66	0,58
Canada	0,65	0,57	New Zealand	0,61	0,53
Chile	0,42	0,27	Norway	0,68	0,61
Czech Republic	0,53	0,48	Poland	0,48	0,44
Denmark	0,71	0,63	Portugal	0,42	0,37
Estonia	0,39	0,34	Russian Federation	0,24	0,23
Finland	0,67	0,59	Slovak Republic	0,47	0,41
France	0,60	0,53	Slovenia	0,55	0,47
Germany	0,63	0,56	Spain	0,62	0,55
Greece	0,47	0,42	Sweden	0,68	0,61
Hungary	0,40	0,36	Switzerland	0,68	0,61
Iceland	0,57	0,50	Turkey	0,30	0,17
Ireland	0,63	0,56	United Kingdom	0,67	0,60
Israel	0,44	0,27	United States	0,68	0,64
Italy	0,55	0,47	OECD average	0,58	0,54
Japan	0,52	0,35			

Source: OECD, better life index and own calculation

BLI in comparison with different qualitative measurement of economic growth and development in our opinion it is necessary to extend this index with dimension of economic security and also change the indicator life expectancy at birth for the indicator assumed age of the healthy life because in our view, it better reflects a qualitative shift in individual countries towards the objective of increasing the well-being of society.

Economic security index for each country is calculated as:

$$\text{Index} = \text{unemployment} \frac{\text{maxvalue} - \text{rate of unemployment}}{\text{maxvalue} - \text{minvalue}}$$

- Index of replacement ratio³ =
$$\frac{\text{index of replacement} - \text{maxvalue}}{\text{maxvalue} - \text{minvalue}}$$
- Index of unemployment risk index = 0.8 * unemployment rate + 0.2 * index of replacement
- Index of disease risk =
$$\frac{\text{maxvalue} - \text{ratio of expenditure for health care from disposable income}}{\text{maxvalue} - \text{minvalue}}$$
- The risk of poverty of one parent = poverty rate for women with a child under 18 years * poverty gap * divorce rate per 1 000 inhabitants
- Index of poverty risk one parent =
$$\frac{\text{max value} - \text{ratio of poverty risk of one parent}}{\text{max value} - \text{min value}}$$
- The risk of poverty in old age = rate of population aged 45-64 years * rate of poverty in old age * poverty gap
- Index of poverty in old age =
$$\frac{\text{max value} - \text{risk of poverty in old age}}{\text{max value} - \text{min value}}$$

Index of economic security = index of unemployment risk + index of disease risk + index of poverty risk + index of poverty risk of one parent + index of poverty risk in old age.

If we look at the results of the data in table 1 we can see how change in BLI measurement causes a change in the total value of the index of each country. If we look at the countries of Central and Western Europe we can conclude that the resulting change in the index, for each country was not as significant compared to baseline. On average, the change in these countries ranged from 0.02-0.1 level. However, if we look at countries such as Japan, Brazil and Chile, we can conclude that the value of BLI fell by almost 50%. In this example we can see that by extending the index by another dimension, in countries with an average welfare overly wide differences do not arise, but will occur in countries that do not even reach the average value of each indicator compared with the OECD average.

Based on the results it can be demonstrated that representatives of economic policies should ensure continuous and sustainable economic growth, achieving a competitive real economy in the global space, which is not based on cheap labor, the uncertainty in labor relations, which derives its global competitiveness by employees who control the world's most advanced technologies, methods and techniques they can use flexibly and improved cooperates with effective public administration, which forms the basic framework for the stability of the business environment, working in a stable legal environment that is respected and enforceable and perfected open and equal social dialogue.

Government should be based on the belief that economic prosperity Slovakia and its sustainable economic growth is possible by means of general economic convergence with the developed EU countries while maintaining a sufficient level of socio-economic cohesion. This is particularly the stability, favorable business environment and increase competitiveness.

The economic crisis has not only necessitated considerable resources to mitigate its negative effects, but also revealed some debts existing development. Among the prerequisites for economic development should therefore include increasing public sector efficiency while maintaining the fundamental values of the solidarity and cohesion, the implementation of which is essential and is in line with the needs of sustainable economic development.

³ It is a percentage of the retirement pension which is payable at retirement from the income of workers from which they pay contributions to the pension system.

Particular developments in economic growth, public finances and unemployment suggests that the impact of the global crisis was reflected in higher costs for stable economic growth and to ensure the necessary socio-economic cohesion than what those costs were before the crisis. Therefore, it is necessary to put increased demands on management efficiency and effectiveness of economic policy measures in terms of consolidation and sustainability of public finances.

The main tool to achieve balanced and sustainable development of the national economy, the financial and economic policy, addressing those aspects of finance and the real economy that determine the nature of the further development of Slovakia. These policies should therefore be designed to be further enhanced by the constitutional value orientation of Slovakia for the sustainable socio-environmental development and the market economy and strengthening certainties of life of its inhabitants.

The government should consider the results of better life index in the process of sustainable development as national interest of the Slovak republic and to achieve and maintain a high quality environment protection and rational use of natural resources. Key and the key instrument for sustainable development should consider the orientation of economic development for the consistent production, which is consistent with both the social as the ecological requirements of the company. Special care should be given to the use of available labor in regions with underdeveloped environmental infrastructure.

At the same time the aim should be focusing on optimizing the spatial arrangement and functional use of land, protection of natural and cultural heritage, building environmental monitoring and information system, raising environmental awareness and the awareness of the environmental situation. This means that it is necessary to achieve rational use and protection of natural resources - water, soil, air, rocks, wild fauna and flora.

At the same time, the government should devote rational utilization of domestic mineral resources and promote the development of businesses that use them and the extraction and treatment technology do not affect negatively on the environment. The basic starting point in eliminating environmental risks should be the control of environmental safety, greening of buildings, equipment and products.

Evaluation of the economic performance of countries in the globalization process requires under different macroeconomic analysis and forecast of the economy to take into account more and more new alternative indicators for measuring economic development. R. Vintrová in his work „Convergence of the Czech Republic and the Slovak Republic - current status and selected problems „in 2006 stated that the prosperity of the country is not only the result of the amount of goods and services produced in the economy, but it depends mainly on the structure of production and its quality. Appropriate structure and quality sees benefit in exchange of production and services with foreign countries. In his work analyzed the development of the indicator terms of trade, which are calculated on the basis of real GDP. Based on this analysis, it was confirmed that if we measure the performance of a country using the GDP figures of the country which may grow faster, taking into account other measures of growth to achieve much worse.

J. Van der Bergh (2009) pointed out in his study on the shortcomings GDP figures one of the main problems, which lists the sustainability of growth. With a significant use of natural resources or erroneous allocation of investments are the inhabitants of much worse than the denomination of GDP, because there is dwindling natural resources for future generations.

Awareness of the importance of the concept of sustainability issues and current well-being in terms of environment impact on human well-being can also be seen in the recently created reports SSF and OECD initiatives. SSF report defined sustainable development as one of the three areas on which to focus in the development of an alternative indicator, although it has not exactly identified the sustainability indicators to be measured, pointed to its importance in the future. On the other hand, the OECD initiative has incorporated sustainability and environmental quality as a separate dimension of the newly created indicator of well-being.

O. Filko, Ľ. Odor, Š. Kiss M. Šiškovič (2010, p.7) in their study "How to eat off the charts: 10 recipes for the Slovak economy" also devoted a lack GDP figures but in terms of quality of life. As one of the problems indicate that significant welfare also depends on free time.

For the first comprehensive alternative regulation of the values of GDP sphere of leisure is considered MEW, which was introduced back in 1972. Although the authors take into account the starting point of GDP, but by adjusting the subjective calculated the monetary value of leisure time. A second experiment, involving leisure time in the measurement, in 1995 real growth indicator (GPI) as a measure of economic well-being, which contain measures with lots of new categories, and one of them the loss of free time due to work.

In general we can say that the provision of information on the future orientations of economic policy is required creation of an alternative indicator to complement GDP indicator of the quality dimensions, which are not included.

The best-known composite indicator among the three is the human development index, but the concept of human development is much broader, and should therefore be used primarily to compare levels between different demographic groups of the population within a country, provided that the data meets aspects of statistical quality for the needs of creating this index. Better life index considers leisure as depending on finding the right balance between work responsibilities, family commitments and personal life. Individual faces the problem of duality, when working, can earn too little deprives thus to achieve the desired standard of living, but on the other hand, if you work too much, it can have a negative impact on their psychological well-being and losing leisure.

Based on the data and the results of BLI in the dimension of balance between work and non-working activities, we can conclude that the evolution of the balance significantly changed in recent years, as evidenced by the overall increase in leisure time and reduce working hours. At the same time, we can conclude that the mentioned dimension ultimately has an impact on the dimensions of subjective well-being of individual's evaluation, which ultimately leads to an increase in the total value of the indicator. On the other hand, we must note, however, that while we can identify growth in the number of hours of free time, but we do not know even one of the three indicators clearly define whether the free time was well used, and thus whether the growth of free time actually ultimately qualitative affects the welfare of the people or just their subjective feeling.

Despite its positive aspects, it could be further improved by using at least some changes. For a qualitative shift in the measurement of this index, we consider the change assessment scales each dimension. In our view, it is necessary to fix scales dimensions at different levels, not equal to one as is currently the case. Although representatives of the OECD argue that examined various dimensions of subjective assessment based on the respondents on the internet. In our view, this is not the most appropriate method for determining the scales, because individuals of different ages evaluate different living conditions. It is also necessary to create groups of dimensions depending on the importance of economic policy.

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The disadvantage is that now most of the indicators entering the index is not available at the national level, in other words, does not compare the differences within a country or between different social groups (e.g. young versus older, etc.) depending on the availability of data, the could be future output index expanded by this option. A disadvantage of this index is the same time that originated relatively recently and currently it can not be compared over time because its methodology is still being fine-tuned.

All these shortcomings and many other measurement limits economic growth by GDP figures lead to the need to actively engage with and explore alternative methods, which take into account the qualitative aspects of growth and contribute to the elimination of these deficiencies in the measurements. It should be noted that currently there are many approaches to developing such an

alternative indicator, but so far none of the creation of alternative indicators to economic policy-making, as an addition to GDP figures not used.

Conclusions of the study lead to the progressive implementation of the requirements of any of the alternative indicators in the formulation of economic policy. However, before such implementation is necessary to develop a strategy for the use of various alternative indicators for development. Views on the objectives and tools necessary to change the dimensions of quality of life and economic levels should there should combine into a coherent and continuously updated concept, which originated in close liaison and discussion of government and opposition forces, state and regional institutions, business and academic circles, trade unions and the third sector. Such a report on integrating the use of alternative indicators is the first step in creating a knowledge base.

Based on observations of alternative indicator measurements we conclude that although we can identify exactly where the dimensions of human well-being, each country is lagging behind or stands out in comparison with other countries surveyed, but we can not say with certainty exactly how these different dimensions used to respond to economic policy instruments. For example, increasing the dimensions of health may be the result of increasing environmental quality or increase spending in health. Improvement of the educational dimension can be positively influenced by increasing state budget expenditures in research, science or upgrading of teaching in schools.

These aspects are need to be known before implementing the use of these indicators in order to properly focus the tools and set the objective of economic policy. We also consider this as an area that could then be further examined, and which would significantly affect future qualitative understanding of the issue.

3. CONCLUSIONS

That economic growth was rather vague concept, we need a tool that can be measured, whether the country move towards long-term sustainable development or, on the contrary, the situation in the country and getting worse or development reflects the change in the quantitative dimension, or is the result of qualitative changes.

There are long-term efforts of many economists in collaboration with experts from other professions to develop an alternative indicator that would reflect plausible development of society, not only the performance of the economy in the strict quantitative sense.

If we want to fill those needs in terms of social inclusion synthetic analysis, it is necessary to establish a comprehensive index that also allows the comparison between countries. To create such a comprehensive index should be taken into account composite indicators approach which basically consists of an aggregation of several basic indices to include a wide range of sizes, which affect what indicator intends to measure (human development, well-being, environmental sustainability respectively. other quality indicators of people's lives). Unlike indicator such composite indicators provide a uniform method of measuring the dimensions of well-being heterogeneous.

Making these types of index currently flourishing as the social and environmental statistics have become more readily available and measurement thus becomes increasingly easier. The latest attempt at international level to present the best of the range of comparable and aggregate welfare indicators for developed and emerging economies is a set of indicators involved in better life index, which was based on the experience of the last 10 years, leading to contemplate better ways to measure growth, we have identified the key issues that are essential for the well-being of material living conditions and quality of life. Under this initiative, the statistics on critical aspects of human life important but, in themselves, are not sufficient and it is necessary to be combined with an understanding and analysis of how these outcomes, as measured by these indicators, react to policy measures.

Evaluation of the results of each alternative indicators of the Slovak Republic compared with OECD countries suggests that a key issue for further development of the Slovak Republic is gradually eliminate the gaps in various aspects of the qualitative dimension of each alternative indicators. Compared to more developed EU countries and OECD countries is therefore needed real convergence.

The main priority of Government policy should be, in terms of GDP that should be relatively high rates of economic growth have been achieved through growth of technological productivity, i.e. based on technological upgrading and increasing the contribution of human error.

In terms of the qualitative dimension of economic growth, entering the alternative indicators should be a top priority of government economic policy should become a positive influence on labor productivity dimension and dimensions of wages and job opportunities.

Influencing wages may lead to an increase in labor productivity, which can increase real wages and living standards of the population, thereby increasing the dimension of subjective perception of well-being. It must however choose the right economic policy, because if there would be wage pressures and wages would rise faster than productivity, in turn decreasing competitiveness of enterprises, as a result, would have to lay off and growth, unemployment, and this would in turn cause a decrease in negative all these dimensions of human welfare.

The second recommended dimensions that economic policy should be addressed are the dimension of education and skills.

To influence education should simultaneously be accompanied by economic policy measures and measures to encourage technological productivity growth, enabling the growth of the population's income.

From other economic policy recommendations should be in terms of the efficient functioning and use of alternative indicators to accept the need for a more flexible labor market, allowing greater mobility of labor, and thus faster adaptation of demand and supply shocks.

At the same time we see that the use of different indicators in assessing the economic performance of individual countries, is a qualitative step forward, but there are dimensions of life of people who are still not included in the measurements, and to create space for new possibilities of extending existing or create new indicators, and by providing space for further study in this area.

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