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Well-being in the Czech Republic in an Aggregate Perspective[1]

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Abstract: The article assesses well-being in the Czech Republic compared to other Visegrad countries (Slovakia, Hungary, Poland) and neighbouring Germany and Austria. By employing various approaches designed by several international organisations it takes an aggregate perspective to assess both the current well-being and its sustainability into the future. All employed indicators that relate to current well-being evaluate the well-being in the Czech Republic as moderate among the OECD countries. The results indicate that the position in well-being rankings improves with the growing number of dimensions or subjective factors included in the well-being measure, mainly due to the reduction in relative importance of income dimension and higher emphasis on the multidimensionality and complexity of well-being. In the case of sustainability, large differences can be identified in evaluation stemming from Happy Planet Index and Sustainable Society Index perspective. Although both of them agree on unfavourable situation as regards environmental sustainability in the Czech Republic, different accent on economic area alters the final result substantially. The analysis shows that for any well-being assessment, the choice of indicators is crucial and a large portion of caution is necessary when interpreting these.

Key words: well-being, sustainability, subjective life satisfaction, comparative studies

JEL Classification: I31, Q56, P52

Introduction

Well-being, life satisfaction and happiness of people have drawn increasing attention of researchers across various social and behavioral sciences. Well-being is hard to define and measure as it covers many aspects of people's lives. For many decades, well-being has been evaluated mainly based on economic factors, with the Gross Domestic Product (GDP) as the main metric for gauging the quality of people's lives. The past two decades brought many serious discussions which doubted the use of GDP as the main metrics for well-being considerations. Relevancy of such discussions magnified in light of the adverse economic developments which followed the financial crisis.

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Many initiatives assess quality of human lives from a number of perspectives, the economic being only one of them. Among these initiatives, the most influential has recently been the work of the Commission on the Measurement of Economic Performance and Social Progress, as summed up in the 2008's report (Stiglitz, Sen, Fitoussi, 2008), the 2009 EU Communication called GDP and Beyond (EC, 2009) and the follow-up action, and the OECD Better Life Initiative launched in 2011. In addition, numerous national initiatives arose, which brought the issue closer to the national policy-makers (for an overview see OECD, 2013). Recently, Hák and Janoušková (2013) address utilisation of well-being, or "beyond-GDP" indicators in the Czech Republic. The authors point out that although the term has not been widely promoted or consistently used in the Czech Republic several initiatives to assess well-being in an aggregate perspective overreaching the GDP-based approach already took place here.

This article attempts to take an aggregate perspective on human well-being in the Czech Republic, linking both its subjective and objective dimensions and covering economic, environmental, personal, and social domains. While mainly building on the approach set by OECD Better Life Initiative, we also compare it with several other both objective and subjective well-being indicators which come from different sources. We also take a closer look at the issue of future sustainability of current well-being. We compare existing well-being measures and show that these are critically dependent on the underlying framework covering the choice of suitable indicators or methodological background.

Our research focuses on the Czech Republic, and compares the situation here to situations in the remaining Visegrad countries, Hungary, Poland and Slovakia, which share similar socio-cultural, economical and historical background. Moreover, Western European patterns are represented by the neighbouring Germany and Austria. We try to identify specific patterns of development of well-being and the role of its various determinants across different dimensions.

The empirical research on well-being in the Czech Republic has been rather scarce so far. The country has mainly been studied as one of the transitive countries without any special focus on the particular Czech case (see for instance Bartolini et al., 2012, or Easterlin, 2009; for a comprehensive overview of the existing literature see Selezneva, 2011). Only two domestic studies focused on the situation in the Czech Republic: Hamplová (2004) analysed life satisfaction of individuals and its relationship with the main socio-demographic characteristics of individuals. Sirovátka and Saxonberg (2011) examined inequalities in happiness, its determinants and the role of a welfare state. A recent study by Večerník and Mysíková compares subjective life satisfaction in the Czech Republic to the one in Central Europe (Večerník and Mysíková, 2014a), respectively in the entire European Union (Večerník and Mysíková, 2014b). Yet, research offering an aggregate picture of well-being in the Czech Republic under different perspectives has not been carried out. In our paper, we try to fill this gap in the literature.

The article is structured as follows: The following chapter deals with methodological issues of measuring well-being, describes the reasons behind the recent reluctance of using GDP as a well-being metric, and discusses alternative approaches. The third part assesses the well-being in the Czech Republic compared to other countries based on Human Development Index and subjective Life Satisfaction indicator. The fourth chapter presents the OECD approach to well-being measurement established in Better Life

Initiative, as described in *How's Life? Measuring Well-Being* dashboard and summed up in *Your Better Life Index*, and compares it to previous indices. The fifth chapter takes a closer look at future sustainability of current well-being in the Czech Republic and other countries. The sixth, and final chapter concludes.

Measuring Well-being: Methodological Issues

The discussions concerning validity of the traditional GDP-based system for measuring human well-being are as old as the system itself. This approach has been widely doubted for several reasons. Firstly, GDP reflects the economic dimension only; it does not capture a large variety of individual and social determinants of actual well-being. These cover mainly factors that cannot be traded on market, such as happiness, health status, family relations, or personal security. Yet, the GDP-based approach suffers from many shortcomings even in the economic dimension (as summarized in OECD, 2011).

The first limitation stems from the very definition of this metric: Since GDP refers to value of goods and services produced over given time in a given country, it completely excludes the residents' income from production abroad and, on the contrary, it covers domestic income of non-residents. Moreover, it does not reflect the consumption of capital goods and therefore overestimates the level of consumption. Furthermore, the aggregate number does not show the distribution of goods and services among the inhabitants, and thus fails to capture the degree of (in)equality in a country. GDP also does not reflect the sustainability of economic development and does not cover the value of non-market services. Finally, some goods and services may increase the GDP while reducing the level of individual well-being.

The relation between income and well-being was subject to large discussions which followed the seminal work of Easterlin (1974). The author showed that while poor people tend to be less happy than rich people in the same country, the development of average income and happiness in the country are only very weakly related (for details on the follow-up discussions see Štika, 2009; or Di Tella and MacCulloch, 2006). The majority of current researchers agree that the wealthier a state, the lesser the significance of income as the driver of well-being. Moreover, many important drivers of well-being are not at all, or only mildly related to income (e.g. health, social contact).

Still, GDP, and more specifically, its per capita metric and real development in time, remain the main indicators used to assess or compare well-being of countries and their citizens. The main reason behind the popularity of this metric is probably its simplicity: to assess the welfare of people only a single headline indicator is observed. However, this simplicity also reflects the main disadvantages: Simplified and reduced information. Yet, well-being is a multidimensional phenomenon with many determinants.

According to Boarini et al. (2013), the multidimensionality of well-being can be addressed in three different ways. First, a summary dashboard of more indicators covering various dimensions can be constructed. Second, a concise picture can also be reached by calculating a single composite indicator aggregating the physical indicators across different dimensions. The third, and the least widely used way means calculating an aggregate monetary equivalent of well-being. All these approaches have their advantages and limitations. While summary dashboard allows for examining the different aspects of

well-being and their development in time, lack of simplicity is its main disadvantage. Contrary to that, simplicity is the main advantage of composite indicators, but their validity is critically conditioned by soundness of many assumptions that enable their aggregation. As well-being is a multidimensional phenomenon, any attempt for its quantification by aggregation necessarily includes a weighting scheme which would describe the relative importance attached to each of the well-being dimensions by each individual or society.

No clear consensus can be found in existing literature on the issue of weighting. Decanq et al. (2013) calculate and compare various weighting schemes on a recent dataset for Flanders, and conclude that the resulting well-being of different population sub-groups crucially depends on the weighting scheme applied. In contrast, OECD (2011) finds little difference in total outcomes under different weighting schemes. Boarini et al. (2013) show that in practice people's choices come close to equal weights. This result is similar to that of Hagerty and Land (2007), who conclude that equal weights may often be the best approximation of consensual weights. To complicate the situation even more, the set of weights may differ across different societies and cultures. Nevertheless, Boarini et al. (2013) show that the composite index might be robust to changing set of weights applied, because due to the correlation of used indicators of well-being cultural differences can be overcome.

In recent economic research, human well-being is often viewed from the subjective point of view and measured by an individual's response to a survey question like, *"All things considered, how satisfied are you with your life as a whole these days?"*[3] The questions on subjective well-being are usually measured on a scale from 4 to 11 points.[4] The new stream of economic research based on subjective data was largely enabled by increasingly available broad and comparable datasets. Still, several objections exist against such an approach (summarised for instance by MacKerron, 2011), raising the issue of potential differences in understanding and interpreting the survey questions, or differences in individual subjective grading scales. These may reflect in both random and non-random variation, the latter of which may present a serious obstacle to an empirical analysis. Another potential objection relates to cultural differences in values and norms which complicate any international comparison based on subjective data (Fleche et al., 2012). Nonetheless, subjective measures have been commonly applied in other scientific disciplines and compelling evidence exist that these have the power to predict human behaviour in a meaningful way: When tested against a variety of indirect indicators of well-being, the expected relationships were mostly confirmed (Fleche et al., 2012).

[3] The question comes from the World Values Survey.

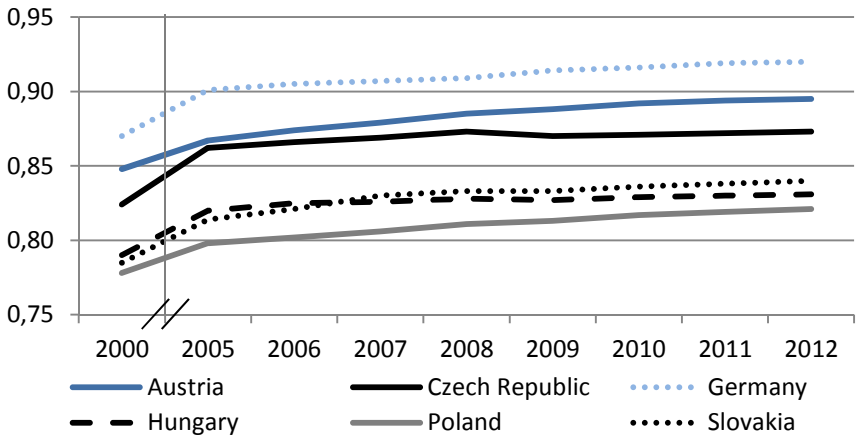
[4] Subjective well-being comprises several concepts. On the one hand, there are evaluative measures in the form of reflection made by a respondent, and on the other hand, measures of affect, which relate to the respondent's emotional state in a given moment. While life satisfaction is the most common of evaluative measures, happiness is the most commonly used measure of affect.

Human Development Index and Subjective Well-being Indicators

A large variety of alternative measures of well-being has been designed to overcome limitations of GDP approach. While some of them represent synthetic indicators relating to overall well-being situation, others relate to subjective level only.

Human Development Index (HDI), introduced by United Nations Development Programme (UNDP)[5] in 1990, was among the first synthetic well-being metrics designed to overcome the GDP-related issues. It combines information from three dimensions: "A long and healthy life" (measured by life expectancy at birth), "Education" (measured by mean and expected years of schooling), and "Decent standard of living" (measured by Gross National Income per capita, PPP US$). This composite indicator reaches values from 0 to 1, where 0 is the worst. HDI is published annually and covers most countries of the world. The development of HDI in the examined countries is depicted in Figure 1.

Figure 1 Human Development Index, 2000-2012



Source: UNDP

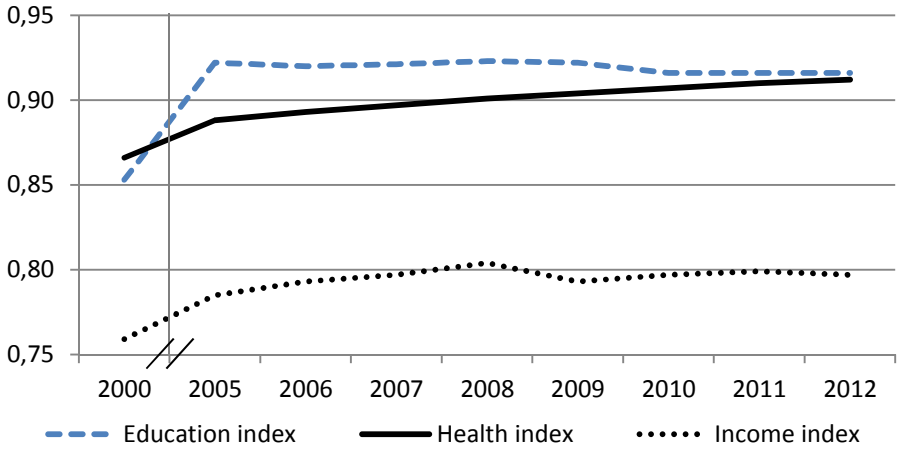
Among the six examined countries, the Czech Republic with a moderate HDI value is close to Austria, and the difference in their levels do not seem to narrow. HDI reaches the highest value in Germany, while Poland lies on the opposite side of the spectrum, closely followed by Hungary and Slovakia. HDI was on the rise in 2000-2012. Between 2000 and 2005, HDI increased by 5% in the Czech Republic and experienced the highest growth among the six countries. The pace of growth tended to slow down after 2005: between 2006 and 2008 Slovakia exhibited the fastest HDI pick-up of annual average 0.8%, compared to 0.4% in the Czech Republic. Despite significant GDP downturn in 2009, the economic recession after the financial crisis resulted in a decline of HDI in

[5] For the Czech Republic the data is only available for 2000 and from 2005 on.

two countries only: In the Czech Republic and Hungary. Slovak HDI stagnated in 2009, and a continuing growth of HDI could be observed in Poland, Germany, and Austria. Both poor performance of the Czech economy and weak growth of outcomes under educational and health HDI dimensions after 2009 translated into negligible increase in HDI from 2010 to 2012. Average annual growth reached 0.1% only, which represents the worst result in the group of the countries examined (in contrast, Austria, Poland, and Slovakia all recorded 0.3% average annual HDI growth).

A detailed picture on the development of individual HDI components in the Czech Republic is offered in Figure 2. The income component reaches the relatively lowest value, and as a reflection of unfavourable economic developments shows no solid growth after 2008. Similarly, education shows an uneven development without any clear trend after 2005. The only improving dimension is the health component, steadily increasing throughout the period.

Figure 2 Human Development Index Components in the Czech Republic, 2000-2012



Source: UNDP

A new well-being measure was introduced by UNDP in 2010: the Inequality-adjusted HDI (IHDI). In this indicator, the original HDI is adjusted for inequalities in distribution of outcomes in each of the three dimensions. For no inequality, HDI and IHDI are equal, while growing inequality reduces the value of HDI. The difference in these two indices represents the loss in potential human development due to inequality.

Table 1 shows values of IHDI compared to HDI, and the main drivers of differences between these two indices. The data indicate that inequality existing in OECD countries may have a large effect on well-being: 12.5% of the total HDI value was subtracted due to inequality in all OECD countries. Among the examined countries, the difference between HDI and IHDI is the lowest in the Czech Republic, where its IHDI value approaches that of Germany and especially Austria. The relatively low degree of inequali-

ty is apparent for all the three HDI dimensions covering education, income, and health in the Czech Republic. Although relatively low when compared to other countries, inequalities in income dispersion in the Czech Republic are significantly higher than disparities in health and education, similarly to other examined countries.

Table 1 HDI and Inequality-Adjusted HDI, 2012

	HDI	IHDI	Loss due to inequality in education (%)	Loss due to inequality in income (%)	Loss due to inequality in life expectancy (%)	Overall percentage loss (%)
Austria	0.90	0.84	2.5	12.7	4.2	6.6
Czech Republic	0.87	0.83	1.3	10.7	3.9	5.4
Germany	0.92	0.86	1.8	14.5	4.0	6.9
Hungary	0.83	0.77	4.1	12.2	5.7	7.4
Poland	0.82	0.74	6.3	17.1	5.8	9.9
Slovakia	0.84	0.79	1.5	11.3	5.7	6.3
OECD	0.89	0.78	9.6	21.3	6.0	12.5

Source: UNDP

With an increasing interest of researchers in examining well-being rose the amount of data sources offering information on subjective well-being of people. For the Czech Republic, several relevant sources may be utilised, see Večerník (2012). In our article we compare the aggregate indices with Gallup World Poll data on subjective life satisfaction as presented by OECD (2013, 2011, and 2009).

Table 2 sketches the situation in subjective well-being in the six examined countries in years 2006, 2010, and 2012 (unfortunately, longer time series are not available). The highest mean life satisfaction (LS) is in Austria and Germany with a subtle increasing trend. The Czech Republic shows a moderate level of LS among the examined countries, and is close to that of Slovakia. The data show no increasing trend that would indicate a convergence towards western-European standard represented by Austria or Germany. A modest decline in LS was recorded in the Czech Republic and Poland in 2010 with a subsequent pick-up in 2012. In contrast, life satisfaction registered a huge downfall in Hungary in 2010; no signs of improvement were recorded two years later. Slovakia shows a very different picture; LS in this country rose between 2006 and 2010 but slightly corrected this growth in 2012.

According to OECD (2013), financial crisis was reflected in deterioration of subjective life satisfaction in OECD countries, with higher unemployment as the main channel through which the adverse macroeconomic circumstances translated into subjective LS. LS fell in 2009, increased in 2010 with recovery of economic activity, but then declined again in OECD countries in 2011. Detailed data for the Czech Republic are not available but the situation in 2010 and 2012 indicates a similar development.

Table 2 Life Satisfaction (Cantril Ladder, mean value) in 2006, 2010, and 2012

	2006	2010	2012
Austria	7.1	7.3	7.4
Czech Republic	6.4	6.2	6.3
Germany	6.6	6.7	6.7
Hungary	5.2	4.7	4.7
Poland	5.9	5.8	5.9
Slovakia	5.2	6.1	5.9

Note: The Cantril Ladder is measured on a scale from 0 to 10.
Source: Gallup World Poll in: OECD (2013)

Well-being in OECD Perspective

As a part of its Better Life Initiative, OECD designed a framework aiming to overcome limitations of approaches which are based on GDP. To understand people's well-being, it builds upon three pillars: material living conditions, quality of life, and sustainability. This approach draws on the framework proposed by the Commission on the Measurement of Economic Performance and Social Progress (Stiglitz, Sen and Fitoussi, 2008) and is closely related to the large quantity of literature on this topic. Full methodology is described in OECD (2011 and 2013).

OECD extends the number of observed indicators to better capture individual dimensions, both in objective and subjective perspective.[6] The focus is put on the outcomes rather than drivers of well-being (e.g. health care status vs. health care expenditure). Such approach takes into account not only well-being today but also the one in the future, as it is influenced by our today's actions, and finally it considers distribution of well-being across individuals, which is where large discrepancies may exist.

The Better Life Initiative has two main outcomes: The first one is represented by the *How's Life? Measuring Well-Being* (OECD, 2011 and 2013) publication, a summary dashboard reporting on quality of current well-being in eleven broad domains. Well-being is measured in terms of outcomes achieved in the domains reflecting material living conditions: Housing, Income, Jobs; and in the domains relating to quality of life: Community, Education, Environment, Governance, Health, Safety, Work-Life Balance, and Life Satisfaction. Each of the domains is measured by several indicators. The second outcome is Your Better Life index, which is a composite interactive indicator combined from these eleven dimensions.

[6] The approach is building on results of existing literature, best practices for measuring well-being, recommendations from the Stiglitz-Sen-Fitoussi Report, as well as on consultations with international experts and with national statistical offices.

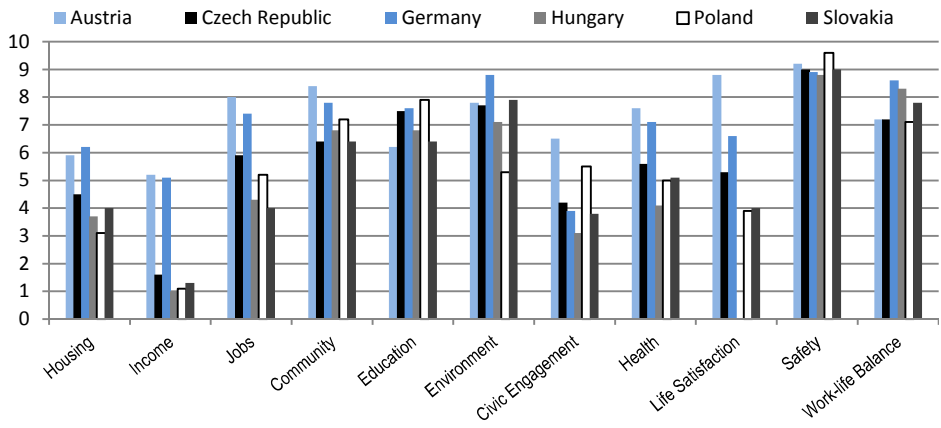
Dashboard results

Summary OECD dashboard covers twenty-five headline indicators gathered along the aforementioned eleven well-being dimensions. For each of the indicators, value and also position among all OECD states is given. An aggregated score is available for each of the dimensions (after normalisation and averaging of the values of the indicators covered), enabling comparison of a country's performance across dimensions and across countries.

Generally, the main drivers of overall well-being performance (as summarized in the Better Life Index, see later) are health status and subjective well-being, followed by civic engagement and governance, jobs and earnings and education and skills. On the contrary, work-life balance, social connections and personal security seem to matter less for the overall picture. This corresponds to the results of other empirical research on this topic (see e.g. Fleche et al., 2012).

Figure 3 presents an overview of the six examined countries in performance in the eleven well-being dimension in 2010/2011. Among the OECD member states, the Czech Republic ranks among the countries with moderate overall well-being performance. Poland and Slovakia also belong to this group and, perhaps surprisingly, so does Germany. Austria can be found among the countries with high overall well-being performance, while Hungary placed on the opposite side of the spectrum, among countries with low overall well-being performance.

Figure 3 Well-being Performance Across 11 OECD Dimensions, 2010/2011



Note: Figures show normalized performance which is calculated as simple average of the headline indicators included in each dimension. These values are then normalized with the ratio-scale transformation to re-express values in a 0-10 scale.
Source: OECD

In an aggregate perspective, the six examined countries did not show large differences in scores for education, safety and work-life balance. On the contrary, major variation appeared in income and life satisfaction. The two Western-European countries show

higher degree of homogeneity in scores across the eleven dimensions: The variation coefficient reached 16% for Austria and 21% for Germany. The scores significantly vary in Hungary (variation coefficient at 56%), and partially also Poland and Slovakia (41% and 40%, respectively). A slight variation of scores was noted in the Czech Republic (33%). As OECD (2013) points out, larger homogeneity across the dimensions is generally connected with a higher overall well-being score, as we will also show later.

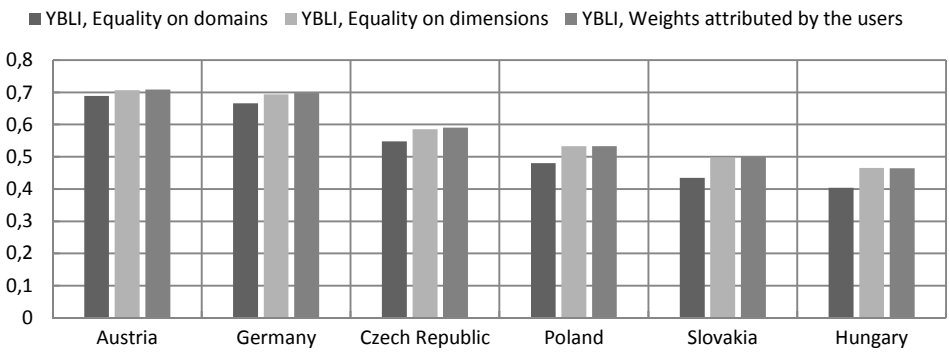
The Czech Republic ranks close to the average in most of the well-being dimensions. The highest scores were observed in education, environment, safety and work-life balance. In contrast, lowest scores were reached in housing, income and civic engagement. Here, the Czech Republic performed similarly to Slovakia. Three exceptions may be identified in dimensions jobs, education and life satisfaction, where the Czech Republic significantly outperforms Slovakia. Poland scores better in community and civic engagement, while the Czech Republic shows better results in environment and life satisfaction. Furthermore, the Czech Republic more or less significantly outperforms Hungary in all but two of the examined areas: work-life balance and community. Compared to Germany, the Czech Republic scores worse in all aspects, the exception being civic engagement and safety. And similarly, when compared to Austria, the Czech Republic scored worse in all aspects except for education.

The OECD results partly contrast with the previously cited HDI data. The Czech Republic reaches the highest scores in OECD education dimension for educational attainment measured as a proportion of adults aged 25-64 who have earned the equivalent of a high-school degree (92% compared to the OECD average of 74%). In contrast, the HDI educational index points to the relatively unbalanced performance of Czech educational system when measured by mean and expected years of schooling. Apparently, the choice of indicator matters significantly. On the other hand, both approaches agree on the relatively poor performance in the income dimension.

Your Better Life Index

The second outcome of the OECD Better Life Initiative is Your Better Life Index. It aggregates the scores from the above-defined eleven well-being dimensions into one synthetic comprehensive indicator. As already mentioned, the aggregation is critically dependent on the set of weights ascribed to each of the dimension. Figure 4 displays the comparison of index with a different set of weights applied. The figure shows that Your Better Life Index (YBLI) takes very similar values for two set of weights: Weights attributed by real users of the OECD Your Better Life Index web application and weights ascribing the same importance to each of the eleven well-being dimensions.

Figure 4 Your Better Life Index With A Different Set of Weights Applied, 2011



Note: Three different sets of weights were applied to Your Better Life Index: "Equality on domains" refers to equal weight given to material living conditions and quality of life (i.e. 1/6 to the three dimensions under material living conditions and 1/16 to the eight dimensions under quality of life), "Equality on dimensions" refers to equal weight given to each dimension (e.g. 1/11), "Weights attributed by the users" refer to the average of weights given by real users of the "Your Better Life Index" so far.
Source: Boarini et al. (2011) In: OECD (2013)

According to YBLI with equal weights on dimensions, the Czech Republic ranked 22nd among the thirty-four OECD countries and in the overall well-being scored above all the three remaining Visegrad countries with Poland on the 25th, Slovakia 28th, and Hungary on the 29th place. As follows from their generally better performance in particular dimensions, Austria and Germany performed better than the Czech Republic and ranked 14th and 16th, respectively. Unfortunately, due to lack of historical data, YBLI does not allow for tracking the development in time. For this purpose, other indicators of well-being have to be used.

Comparison of indicators

As all the above-listed well-being indicators (Your Better Life Index, Human Development Index, Inequality-Adjusted Human Development Index and Life Satisfaction) build upon different methodological background and focus on different well-being dimensions, it is impossible to compare them directly. Yet, indirect comparison of rankings of a group of countries according to various indicators is possible. Employing different measures of well-being somewhat changes the rankings of countries, as indicated in Table 3.

Generally, these changes are small, but for the specific case of the Czech Republic, the results indicate that the score improves once more dimensions or subjective factors are covered in the well-being measure: While the Czech Republic scores on the 25th place for HDI, its position in Better Life Index (and also Life Satisfaction) is somewhat better (23rd YBLI, 22nd LS). This might be connected to the reduction in relative importance of income under the two latter mentioned indicators and higher emphasis on the multidimensionality and complexity of well-being. A similar shift in scores can be identified for Poland (30th in HDI vs. 25th in YBLI) and Austria (17th in HDI vs. 14th in YBLI and

even 9th in LS). At the same time, the positions of Hungary and Slovakia in HDI and YBLI show no difference at all. A large and opposite movement was recorded in Germany which scored very well in HDI (5th), but rather poorly in YBLI (16th). Again, this might be attributed to a different weight of the income dimension which was very high in Germany. Due to relatively low degree of inequality, relative position of the Czech Republic improves substantially when IHDI is considered, unlike in other Visegrad countries. Overall, the data indicate moderate level of well-being in the Czech Republic, lower than those of Austria or Germany, but at the same time higher than those of the remaining Visegrad countries. This picture is robust across all the utilised indicators.

Table 3 Rankings of Countries Among 34 OECD Countries Under Different Well-being Indicators, 2012

	HDI	IHDI	LS	YBLI
Austria	17	12	9	14
Czech Republic	25	14	22	23
Germany	5	5	19	16
Hungary	29	25	34	29
Poland	30	28	28	25
Slovakia	28	22	27	28

Source: UNDP, OECD

Sustainability

So far, this article has mainly dealt with the current well-being situation. Yet, the present state is only one of the aspects of overall well-being. In a broader view, well-being should be considered in a long-term horizon, i.e. in terms of sustainability of the current well-being into the future. In this sense, the recent paradigm of sustainable development is closely related to the approach of assessing well-being 'beyond GDP'. Sustainability of the development is being accented by many national and international organizations.

In its Better Life Initiative OECD aims to approach sustainability as one of the key dimensions of well-being that should be monitored and measured separately from current well-being outcomes (as described above). OECD defines sustainability through the capital approach in terms of the non-negative change of the key assets which can affect well-being over time and ensure maintaining at least current levels of well-being into the future. The key assets comprise physical, natural, human and social capital. While the first and partially also the second aforementioned types of capital have traditionally been covered by statistical measures, the two latter-mentioned present a challenge for any measurement and even interpretation. For this reason, works on any particular dashboard of indicators to be followed in monitoring the stock of assets and their distribution to assess sustainability of current development are still under progress (for details see OECD, 2013).

Several existing compound indices combine more dimensions of sustainability of current development. These usually put an accent on environmental aspect. In our article,

we deal with two of them in detail: Happy Planet Index and Sustainable Society Index. Table 4 sketches the values of these indices for the examined countries.

Table 4 Happy Planet Index and Sustainable Society Index, 2012

	Happy Life Years	Footprint (gha/capita)	*HPI*	*HPI OECD rank*	Human well-being	Environmental well-being	Economic well-being	*SSI*	*SSI OECD rank*
Austria	64.3	5.3	*47.1*	*11*	9.2	4.5	7.0	*6.6*	*3*
Czech Republic	54.6	5.3	*39.4*	*27*	8.7	2.8	8.0	*5.6*	*10*
Germany	60.0	4.6	*47.2*	*10*	9.0	3.4	5.8	*5.6*	*11*
Hungary	44.1	3.6	*37.4*	*29*	8.7	3.5	4.7	*5.3*	*17*
Poland	51.3	3.9	*42.6*	*20*	8.5	3.4	6.1	*5.5*	*12*
Slovakia	52.4	4.7	*40.1*	*26*	8.7	3.8	6.9	*6.0*	*7*

Source: Abdallah et al. (2012), Sustainable Society Foundation

Happy Planet Index (HPI) was introduced by New Economics Foundation in 2006 as a measure of sustainable well-being which includes environmental impact. HPI combines information on experienced well-being, life expectancy, and ecological footprint.[7] It is an efficiency measure stating the number of Happy Life Years (life expectancy adjusted for experienced well-being) achieved per unit of resource use.[8] Under the environmental aspect higher scores go to countries with lower environmental impact expressed in ecological footprint.

The Czech Republic reached a good score in life expectancy, average score in experienced well-being, but as a result of its relatively high ecological footprint, it ranks 92nd in the world (out of 151 countries) and 27th in the OECD ranking (34 countries). Poland outperformed the Czech Republic in this indicator due to significantly smaller environmental impact, Germany and Austria mainly due to higher life expectancy and experienced well-being. Based on HPI, well-being in the Czech Republic still seems far from sustainable.

[7] Ecological footprint is a measure of human demand on natural capital. It measures the amount of land and sea area required to sustain a country's consumption patterns, i.e. land necessary to supply the resources that are being consumed and resources to assimilate associated waste. It includes the land used for generating renewable resources (food, wood etc.), the area covered by infrastructure, and the area necessary to absorb emissions. It also includes 'embedded' land and emissions from imports (Abdallah et al., 2012).

[8] The exact formula is

$HPI = \frac{Experienced\ wellbeing \times Life\ expectancy}{Ecological\ footprint}$ (Abdallah et al., 2012).

Sustainable Society Index (SSI), a metric developed by Sustainable Society Foundation in 2006, offers a slightly different picture. The index consists of twenty-one indicators from eight categories that are aggregated into three well-being dimensions: Human, Environmental, and Economic well-being. Information from these three dimensions is then aggregated into one overall index[9]. Both SSI and individual scores for each indicator, category and dimension are expressed on 0-10 scale (the higher, the better).

The Czech Republic scores much better in SSI compared to HPI: It occupies the 20th place in the world ranking (among the 151 countries covered) and scored 10th in the OECD ranking, thus leaving behind Germany, Poland, and Hungary. Slovakia outperformed the Czech Republic slightly and Austria is a clear winner in SSI score among the examined countries. The Czech Republic exhibits the weakest performance in environmental well-being and at the same time the strongest results in economic well-being. Such performance in comparison with stronger economies of Germany and Austria might seem surprising. Economic well-being in this approach covers five indicators: Organic Farming, Genuine Savings, GDP, Employment and Public Debt. The Czech Republic reached solid scores (over 8) in all of these indicators except for Employment; yet, the very low level of public debt is the main driver of such a good evaluation of economic well-being in the Czech Republic compared to other countries.

Although the overall assessment of sustainability in the Czech Republic offered by SSI seems relatively favourable, the difference compared to results under HPI approach mainly lies in different accent on environmental well-being and the income component. Both metrics indicate that the quality and sustainability of environmental well-being have clear limits in the Czech Republic, but different methodology and also coverage of other indicators alters the general picture given by the overall index.

Conclusion

Well-being is a complex phenomenon with a variety of dimensions. In any attempt for its overall assessment it must be viewed in its complexity, taking into account the many components involved, and their relationship. Well-being is primarily an individual phenomenon. Although it can be aggregated to different levels of societies, such aggregation does not come without problems. Extensive literature and efforts of various organisations try to propose and design a framework for shifting from the traditional GDP approach for welfare assessment to a more complex view. In our article, we take an aggregate perspective on well-being in the Czech Republic. Utilising various approaches designed by various international organisations, we try to assess both the current situation and the sustainability into the future in comparison with Slovakia, Poland, Hungary, Germany, and Austria.

From the approaches employed, OECD offers the most complex view on well-being. Its lack of historical data, though, is the main shortcoming thereof, and allows for a short-

[9] For aggregation of scores under each indicator, geometric average is used. For any aggregation, every indicator/category/dimension receives equal weight.

term perspective only. According to the OECD data, the Czech Republic is one of the countries with moderate overall well-being performance, together with Germany, Slovakia, and Poland. In general, it shows a very similar picture to that of Slovakia. The Czech Republic ranks close to the OECD average in most of the well-being dimensions, while the highest scores were observed in education, environment, safety and work-life balance. In contrast, lowest scores were reached in categories of housing, income and civic engagement.

Human Development Index offers a slightly different picture. Again, the Czech Republic reached a moderate value of this indicator, close to that of Austria. While the Index held on to a solid increasing trend in the 2000-2005 period, the pace of growth slowed down thereafter. Consequently, after a decline registered in 2009, the poor performance of the Czech economy and weak growth of educational and health outcomes translated into only negligible increase in HDI from 2010 to 2012. Yet, the growth in other countries continued and the adverse development in the Czech Republic therefore cannot be attributed purely to the global economic slowdown. Surprisingly, the educational component of the HDI shows rather uneven development with some periods of deterioration of educational outcomes. This contrasts with the previously mentioned OCED results that point in an opposite direction (although for 2012 only). Apparently, the choice of indicators can alter the overall picture substantially. When switching from HDI to Inequality-Adjusted HDI, a relatively low degree of inequality improves the picture of well-being in the Czech Republic substantially and brings it closer to its Western European neighbours, Germany and Austria.

Subjective life satisfaction measure ranks the Czech Republic among countries with moderate level of well-being, again. The data also show a certain effect of economic downturn of 2009: Life satisfaction fell between 2006 and 2010, recovering in 2012. Although detailed data is not available, similar development was registered in other OECD countries.

Direct comparison of results of the indicators described above is not possible because of their different methodology and coverage. We used indirect comparison of rankings of a group of OECD countries according to these indicators instead. For the Czech Republic, the results indicate that the position in rankings improves with the growing number of dimensions or subjective factors included in the well-being measure, mainly due to the reduction in relative importance of income dimension and higher emphasis on the multidimensionality and complexity of well-being. All the indicators that do not take into account the issue of sustainability indicate moderate level of well-being in the Czech Republic, and are lower than those of Austria or Germany, but at the same time higher than those of the remaining Visegrad countries. This picture is robust across the indicators employed.

The analysis shows that for any well-being assessment, the choice of indicators is crucial. In the case of sustainability, large differences can be identified in evaluation stemming from Happy Planet Index and Sustainable Society Index perspective. Although both of them agree on unfavourable situation as regards environmental sustainability in the Czech Republic, different accent on other areas results in a completely different final result: while the Czech Republic holds the unsatisfactory 92nd place in the world ranking under HPI, it ranks much better, on 20th place, in SSI ranking. This result is due

to the very strong evaluation of economic well-being under SSI, where the Czech Republic even outperforms Germany or Austria. The very low level of public debt, which is covered in SSI, contrary to other well-being indicators, is the main driver of such a good result.

Assessment of well-being offers a broader perspective to policy makers when designing or evaluating policies. Few concerns can be raised against the appropriateness of such a complex view in contrast to purely economic perspective represented by the GDP approach. Apparently, complexity of well-being makes it hard to construct an exact, unique well-being measure, and, as a result, any composite index is critically dependent on particular setting of the underlying framework covering choice of suitable indicators or methodological background (including implicit welfare function or weighting scheme). For any well-being evaluations, cautious interpretation of existing indices is necessary.

References

ABDALLAH, S., MICHAELSON, J., SHAH, S., STOLL, L., MARKS, N. (2012). *The Happy Planet Index: 2012 Report. A global index of sustainable well-being.* London: NEF.

BARTOLINI, S., MIKUCKA, M., SARRACINO, F. (2012). Money, Trust and Happiness in Transition Countries: Evidence from Time Series. Working Paper No. 2012-4, Luxembourg: CEPS/INSTEAD.

BOARINI, R., D'ERCOLE, M. M. (2013). Going beyond GDP: An OECD Perspective. *Fiscal Studies.* 34. Pp. 289–314.

BOARINI, R., COHEN, G., DENIS, V., RUIZ, N. (2011). Designing Your Better Life Index: methodology and results. Statistics Directorate Working Paper. Paris: OECD.

BOARINI, R. et al. (2012). What Makes for a Better Life?: The Determinants of Subjective Well-Being in OECD Countries – Evidence from the Gallup World Poll. OECD Statistics Working Papers, 2012/03. OECD Publishing.

DECANCQ, K., VAN OOTEGEM, L., VERHOFSTADT, E. (2013). What If We Voted on the Weights of a Multidimensional Well-Being Index? An Illustration with Flemish Data. *Fiscal Studies*. 34. Pp. 315–332.

DI TELLA, R., MACCULLOCH, R. (2006). Some uses of happiness data in economics. *The Journal of Economic Perspectives*, 20(1). Pp. 25–46.

EASTERLIN, R. A. (1974). Does Economic Growth Improve the Human Lot? Some Empirical Evidence. In David, P., Reder, M. (ed.). *Nations and Household in Economic growth: essays in Honor of Moses Abramovitz.* New York: Academic press.

EASTERLIN, R. A. (2009). Lost in Transition: Life Satisfaction on the Road to Capitalism. *Journal of Economic Behavior and Organization*. 71(1). Pp. 130-145.

EC. (2009). *GDP and Beyond. Measuring Progress in a Changing World.* Commission of the European Communities COM(2009) 433.

EUROSTAT. (2011). Sustainable Development in the European Union — 2011 Monitoring Report of the EU Sustainable Development Strategy. Luxembourg: Publications Office of the European Union.

FLECHE, S., SMITH, C., SORSA, P. (2012). Exploring Determinants of Subjective Wellbeing in OECD Countries: Evidence from the World Value Survey. OECD Statistics Working Papers, 2012/01. Paris: OECD Publishing.

HAGERTY, M. R., LAND, K. C. (2007). Constructing summary indices of quality of life: a model for the effect of heterogeneous importance weights. *Sociological Methods and Research.* 35. Pp. 455–96.

HÁK, T., JANOUŠKOVÁ, S. (2013). "Beyond GDP" Indicators in the Czech Republic. *Statistika.* 93(2). Pp. 86-99.

HAMPLOVÁ, D. (2004). Životní spokojenost: rodina, práce a další faktory. Sociologická studie 04(06). Praha: SOÚ AV ČR.

HELLIWELL, J.F. et al. (2009). International Evidence on the social context of Well Being. NBER Working Papers, 14720, National Bureau of Economic Research.

KAHNEMAN, D., Deaton, A. (2010), High income improves evaluation of life but not emotional well-being. *Proceedings of the National Academy of Sciences of the United States of America.* 107. Pp. 16489–93.

MACKERRON, G. (2011). Happiness economics from 35,000 feet. *Journal of Economic Surveys.* 26(4). Pp.705 – 735.

OECD. (2009). *Society at a Glance 2009: OECD Social Indicators.* OECD Publishing. doi: 10.1787/soc_glance-2008-en.

OECD. (2011). *How's Life? Measuring Well-Being*. OECD Publishing. http://dx.doi.org/10.1787/9789264121164-en.

OECD. (2013). *How's Life? 2013: Measuring Well-Being*. OECD Publishing. http://dx.doi.org/10.1787/9789264201392-en.

SELEZNEVA, E. (2011). Surveying transitional experience and subjective well-being: Income, work and family. *Economic Systems*. 35(2). Pp. 139–157.

SACKS, D. W., STEVENSON, B., WOLFERS, J. (2010). Subjective well-being, income, economic development and growth. NBER Working Paper no. 16441.

SIROVÁTKA, T., SAXONBERG, S. (2011). Life Satisfaction and Happiness in the Czech Republic. In: Greve, B. (ed.) Happiness and Social Policy in Europe. Cheltenham: Edward Elgar. Pp. 11-30.

STIGLITZ, J. E., SEN, A., FITOUSSI, J.P. (2008). *Report by the Commission on the Measurement of Economic Performance and Social Progress.* Retrieved December 12, 2013, from http://www.stiglitz-senfitoussi.fr/documents/rapport_anglais.pdf.

Štika, P. (2009). Ekonomie a štěstí. *Politická ekonomie*. 57(2). Pp. 250–262.

VAN DE KERK, G., MANUEL, A.R. (2008). A comprehensive index for a sustainable society: The SSI — the Sustainable Society Index. *Ecological Economics*. 66(2–3). Pp. 228-242.

VEČERNÍK, J. (2012). Subjektivní indikátory blahobytu: přístupy, měření a data. *Politická ekonomie.* 60(3). Pp. 291-308.

VEČERNÍK, J., MYSÍKOVÁ, M. (2014a). Subjektivní blahobyt v České republice a střední Evropě: makro- a mikro-determinanty. *Politická ekonomie*. 61(2). Pp. 249-269.

VEČERNÍK, J., MYSÍKOVÁ, M. (2014b). (Un)happy transition? Subjective Well-being in European Countries in 1991-2008 and Beyond. WIFO Working Paper, No. 467