

MEASURING WELL-BEING AND QUALITY OF LIFE USING OECD INDICATORS

Karolin Kõrreveski

The United Nations Economic Commission for Europe, the OECD and Eurostat are pursuing work on measuring sustainable development with the aim of promoting policies that would ensure the sustainability of society and the welfare of people. OECD launched Your Better Life Index in May 2011 and published the report “How’s Life?” in October, on the basis of which it is possible to compare the well-being of people in different countries in eleven categories. This article gives an overview of these internationally developed well-being indicators. The aim is to explain why these specific indicators measure well-being the best and what data sources are used to produce these indicators.

Indicators – what and what for?

According to the definition, an indicator is a parameter that indicates, gives information and describes certain phenomena and their evolution in time.

For years people have tried to find ways to measure the well-being of society. Today, many well-being indicators and indexes are already in use. Economic indicators like gross domestic product (GDP) have often been used as a measure of well-being. Certainly, it is an important indicator that shows economic growth, but it is not enough to describe overall well-being as it does not show anything about social or environmental issues such as people’s time use, education, health and quality of environment. Thus, in order to get a full picture of the reality, non-economic factors must be taken into account besides the economic indicators.

As a matter of fact, social indicators have been associated with well-being for years already. The first important records of social indicators originate from the 1960s when people in the United States tried to assess the impact of the NASA space programme on society (Dooren and Aristigueta 2005). Although the project concluded that there is insufficient data for analysis, they still tried to develop social indicators that would be help to assess the effects of different programmes in the future, and thus, detect or prevent certain social processes. A number of influential scientific journals in the USA supported the idea of developing social indicators, and soon other countries and international organizations began to develop social indicator-based statistics. Although the resources for scientific research were cut and interest in the field of social indicators declined in the USA in the 1970s and 1980s, the development of social indicators continued in Europe. Since its foundation in 1961, the OECD has helped governments to develop policies aimed at changing people’s lives for the better. Now, the OECD is taking an active part in the public debate about measuring the well-being of society. According to the OECD, the biggest challenge in measuring well-being is to raise the quality of existing indicators, to identify important gaps in statistics and to invest in those areas where data are lacking.

OECD well-being indicators

The OECD’s report “How’s Life?” is a further development of the Stiglitz-Sen-Fitoussi report published in 2009. Well-being is a multidimensional concept encompassing environmental, economic and social life (Stiglitz et al 2009). Similarly to the Stiglitz report, the OECD uses well-being as a broader concept which covers economic, quality of life and sustainability indicators (Figure 1, p. 29). Both objective and subjective aspects of well-being are taken into consideration, because it is not only important what the real living and working conditions are, but also how

people perceive and assess their quality of life from their own perspective. The indicators have been selected according to international principles: political significance of data, quality of data, comparability, and frequency of data collection. Since many of the indicators proposed by the OECD do not meet the required criteria, these indicators should be treated as information to be supplemented in the future. Ideally, data should be based on internationally harmonized national statistics. Next, quality of life indicators will be introduced, leaving aside the two other dimensions of well-being, material living conditions and sustainability.

Quality of life indicators

The quality of life indicators cover eight domains: health, work–life balance, education, social connections, personal security, civic engagement and governance, environment and subjective well-being. So what exactly is being measured in these areas?

Health

Health is one of the most valuable assets. Studies have consistently shown that health status and job are the main factors that influence a person's quality of life. Health status has an instrumental value, because good health enables working-age people to actively participate in the labour market and lifelong learning, as well as to have good social relationships. In most OECD countries, life expectancy is high, but people often have chronic and long-term illnesses, which prevents living life to the full. Women live longer than men, but they are less satisfied with their health.

The OECD has chosen six health indicators which measure quality of life and are based mainly on social and health surveys: **life expectancy at birth, infant mortality, self-reported health status, self-reported longstanding illness, self-reported limitations in daily activities, obesity and overweight.**

Life expectancy at birth is considered the most reliable indicator for comparing the health of different nations. The only limitation of this indicator is that international differences can be analyzed only by sex. Few countries provide information on life expectancy by educational level or income. According to Statistics Estonia, life expectancy at birth is 75.8 years in Estonia, while for women it is 80.5 years and for men 70.6 years (Rannala 2011). Average life expectancy in OECD countries is 79.5 years. The majority of people in OECD countries say that they are in good health, whereas Estonia is among those countries where the self-reported health status of people is not so good. Every other adult suffers from a long-term disease (Taidre 2011).

Infant mortality rate shows infant (children under one year of age) deaths per 1,000 live births in the same year. Infant mortality rate is influenced by socio-economic environment and the effectiveness of health care services. Since 1970, infant mortality rate has fallen in OECD countries. In Estonia, it is 3.3, which is below the OECD average (4.5).

Being under- or overweight is not healthy. Overweight or obesity is measured by Body Mass Index (weight divided by the square of height in metres). Normal body mass index is in the range of 18.5 to 25. A person is overweight when his body mass index is 25–30, and obese when the body mass index is 30 or more. In 2008, 18% of the adult population in Estonia was obese, which is more than the average of OECD countries.

Work and family life balance

Time is the only resource people have in equal amounts regardless of sex, age, education or income. A person's time distribution between various activities does not only affect the person's own quality of life, but also other family members' quality of life. Children's well-being is dependent on how much time parents devote to them. Upon analyzing work and family life balance, subjective aspects should be considered, because people's preferred daily schedule depends on everyone's family situation and priorities.

The main source for internationally comparable data is the Time Use Survey, which provides the most comprehensive overview of how much time people spend on various activities. But what the Time Use Survey does not reflect, and what should nevertheless be considered, is whether and how much people enjoy the activities they do.

The OECD uses five indicators when describing work and family life balance: **long working hours, commuting time, time for leisure and personal care, satisfaction with time allocation, employment rate of mothers with children of compulsory school age.** The first indicator measures the share of people who usually work 50 hours or more in a week, based on data from the Labour Force Survey. In Estonia, 3% of employees work more than 50 hours in a week, which is one of the smallest shares among OECD countries (Figure 2, p. 31). A long distance between home and work makes the working day longer. Studies have shown that the more time people spend on commuting, the more their subjective well-being decreases. Estonians spend 40 minutes in a day on commuting between work and home. It is less than in most big countries, but more than in Nordic countries, Poland or Hungary.

An individual's mental and physical well-being depends on how much time is spent on leisure and personal activities. The line between personal care and leisure time can be blurry. Leisure includes entertainment, hobby activities and social life; personal care, on the other hand, includes eating, sleeping and time spent on hygiene. In Estonia, full-time employees spend 14 hours a day on average on leisure and personal care activities, according to the Time Use Survey.

Despite the complex and unstable family models of modern society, family is still the main support structure for people. According to the European Quality of Life Survey, couples with children who can rely on family support are happier than couples without children (Eurofound 2010). In general, Europeans are less satisfied with the time spent with family than the time spent on working, although interesting differences can be noticed between countries. For instance, 12% of Greeks say that they spend too much time with their family, while 7% of employees in Austria think that they do too little work.

Women have always been more involved in housework and childcare than men. That is the reason why finding the right balance between work and family life concerns women more often than men. Women's quality of life depends on how they can divide time between work and family, which in turn affects the well-being of their children. Women rather than men stay at home with young children. But when children start nursery or school, women's return to employment is influenced by the support system provided for working mothers, such as flexible working time arrangements. In OECD countries the average employment rate for women is 71%, with the employment rate for mothers with school-aged children a little lower at 66%. But the employment rate for mothers with school-aged children varies greatly between countries, which is a result of different traditions in the society or different support systems, as already mentioned. For instance, in Turkey, Italy, Greece and Ireland, the employment rate for mothers with children of compulsory school age is lower than in Nordic countries and Canada.

Education

Education is a basic human need nowadays. Education is a tool that helps to achieve one's goals in life. Educated people are healthier, more active in social life and they earn higher wages. Even though education should be equally accessible to all, people actually have different educational opportunities starting from the first years of life, because the family's educational background has a strong influence on a person's educational outcome.

The OECD educational indicators used to assess countries' well-being are: **the share of the population aged 25–64 with at least upper-secondary education, participation rate in lifelong learning of the population aged 25–64, educational expectancy at age 15, literacy skills of 15-year-old students, and the students' civic skills.**

In Estonia, 89.2% of the people aged 25–64 have at least an upper secondary degree, while the OECD average is 74%. The participation rate in lifelong learning has increased in Estonia year

after year. In 2010, 10.9% of the population aged 25–64 studied in the formal education system or attended in-service training courses.

The educational expectancy of young people reflects the study motivation of youth, their educational opportunities and the use of these opportunities after compulsory school age, which in many countries is 15. Educational expectancy has increased over time. In most OECD countries, youth at the age of 15 continue studying for a further six or seven years.

Many educational indicators have been in use for a long time already. Nevertheless, gaps can be found also in education statistics, especially as concerns the quality of education or, in other words, measuring of the educational outcome. Surveys like PISA, TIMSS and PIRLS try to fill this gap by collecting data on students' knowledge and skills. PIAAC measures the skills of adults. It enables to compare countries by the quality of educational and training opportunities and countries' competitiveness to function in knowledge-based economy.

An education system is considered effective if everyone has equal study opportunities and the students' achievements are good. The PISA survey has shown that countries with a similar economic level have very different results in education. The best results in students' educational outcomes, according to the survey of 2009, were delivered by Shanghai (China), with a GDP per capita much lower than the OECD average. It shows that a low GDP is not always reflected in educational outcomes (Puksand and Lepmann 2010, 17). The reading skills of Estonian students are at a high level, when compared to other countries. In the world, Estonian students rank 7th in reading skills, 5th in science and 10th in mathematics (Puksand and Lepmann 2010).

Civic education focuses on raising people's awareness of how society functions, including civil rights and responsibilities, who can vote and who cannot, what the functions of different public institutions are etc. Young people's civic knowledge is measured by the International Civic and Citizen Education Study (ICCS). It assesses the civic knowledge of eighth-grade students. Finnish, Danish and Korean students have demonstrated the best results so far. Estonia has achieved the 12th place among 38 countries.

Social connections

As humans are social creatures, their well-being is very much affected by their social network or social capital. Those who are surrounded by supportive friends are happier. In addition to emotional support, the benefits of acquaintances can also be material. For example, in the search for a new job, friends and acquaintances are often much more useful than previous work experience or a university diploma. Strong social relationships can help to develop common values and trust in one another at the community level. In OECD countries, social networks are relatively strong. The majority of people say that they see their friends and relatives on a regular basis and that they have someone to rely on in difficult moments. However, there are differences between groups of people, like the educated and less educated, the young and the old, the rich and the poor.

Indicators that measure the strength of the community or social network are: **social network support, frequency of social contacts, time spent on volunteering, and trust in other people**. Official statistics on the strength of community are limited. Also, differences in the definitions of volunteering make it hard to compare data on different countries. To some extent, internationally comparable data are available from the Time Use Survey and EU-SILC. Most data come from unofficial surveys with small samples.

It is more and more challenging to evaluate the strength of the social network, because the way people live and interact has changed in time. Households are smaller, people are mobile and there are increasingly more people who are committed to their career rather than to their personal life and who rarely meet their friends and relatives. Physical, face-to-face contact is replaced by virtual communication, which raises several questions. If a person follows his friends on a social network page, does it really mean that he is being in direct contact with them? According to OECD data, people communicate with friends more often than with relatives. People in Estonia do not communicate with relatives as often as people in other OECD countries do (Figure 3, p.

33). 52% of Estonia's population contact their friends at least once a week, and 35% are in contact with their relatives.

Social capital is also defined as trust in other people. Trust in society facilitates cooperation between people in achieving a common goal that might be raising the quality of life, for instance. Trust in other people is strong in the Scandinavian countries; people do not trust others in Turkey, Portugal, Mexico, France and Poland. In Estonia, one person out of three believes that other people can be trusted.

Besides its economic influence, volunteer work has an important social value for a society as a whole as well as for the volunteer himself (Kaarna and Noor 2011). According to the Estonian Time Use Survey, 4.5% of people had done volunteer work in the month preceding the survey (Tasuja 2011). Among OECD countries, people in New Zealand, Ireland and USA spend the most time on volunteering.

Personal security

Crime affects all citizens. The prevalence of crime in society makes it an unsafe place where people are afraid to live. A crime often has more victims than just one, because indirectly people close to the victim suffer too. Violent behaviour affects not only physical, but also mental health.

*However, the extent of crime is very difficult to measure. Many crimes are not reported, and thus are not included in official statistics. For example, little is known about sexual and family violence. In order to obtain a comprehensive picture of crime statistics, the information recorded by the police should be complemented with data from surveys. The OECD indicators that measure personal security are: **the number of homicides per 100,000 people, self-reported victimisation, violence against children, and feeling of security.***

Estonia has one of the highest homicide rates among OECD member countries. In 2008, the homicide rate in Estonia was 6.4 per 100,000 people, while the OECD average was 2.1. Compared to other countries, there is also a high proportion of those who have been physically assaulted or robbed during the past 12 months. According to the Gallup World Poll, 5.5% of Estonia's population has been a victim of physical attack. Only 60% of Estonia's population claim that they are not afraid to walk around in their neighbourhood at night. Fatal violence against children and young people under 20 occurs most often in the USA and Mexico.

Civic engagement and governance

Political freedom is one of the basic human rights and freedoms. It increases people's sense of control over their lives. When an individual goes voting, he participates in a public dialogue and shows that he has trust in democracy. A high voter turnout rate raises the politicians' sense of responsibility towards society, which contributes to the implementation of policies that are more effective and represent people's wishes. In many OECD countries, the voter turnout rate has declined over the past decade.

What exactly is measured in this area, considering that civic engagement and governance involve many different aspects? In addition to voter turnout, the aim is to measure trust in public institutions, and the transparency and efficiency of the activities of public institutions. On the one hand, possibilities for engaging oneself in political activities have been analyzed; on the other hand, it is measured how many people actually use these options. The indicators have many shortcomings, because they are based on small samples of unofficial studies or surveys that are not internationally harmonized.

*The OECD indicators on civic engagement and governance are: **voter turnout, participation in other types of political activities, consultation on rule-making, and trust in institutions.***

Voter turnout rate can be measured in two ways: either as the number of total votes cast over the voting-age population or as the number of total votes cast over the population registered to vote. Because of different election systems, international comparisons are limited to some extent. For example, in countries such as Australia, Belgium, Greece and Luxembourg, voting is mandatory.

In these countries, the voter turnout rate is much higher due to penalties for non-participating citizens. In addition to voting, people can show their political preferences by taking part in political demonstrations or by joining a political organization. Political activism is the highest in Norway and Finland, and the lowest in Turkey and Portugal. Political activism is not so high in Estonia compared to other countries. Consultation on rule-making means how much a government enables its citizens to be involved in policy-making. It also indicates whether people are being sufficiently informed about new policies prior to their implementation. Estonia is among the countries where citizens find that they are not sufficiently involved in policy-making, which is reflected in the lack of trust. For example, 60% of the population in Nordic countries trust the country's government, whereas in Estonia barely 20% do.

Environment

One of the biggest challenges for society is to ensure the sustainability of natural resources, so that future generations would be able to live in a healthy and beautiful environment. A person's quality of life is dependent on the surroundings – the extent of polluted air, water, soil; how much there is noise, artificial or natural materials around him. Most diseases are caused by the low quality of the living environment. One of the main factors affecting the living environment is rapid urbanization.

*In the assessment of environmental quality, the OECD has used objective and subjective indicators: **air quality, environmental burden of disease, satisfaction with the quality of local environment, access to green spaces**. The data sources include the World Bank, the World Health Organization, the European Quality of Life Survey and the Gallup World Poll. According to the World Health Organization, 24% of the global disease burden could be prevented through environmental improvements.*

The highest PM₁₀ concentrations in the air among OECD countries are in Chile, Turkey and Poland. PM₁₀ concentrations have decreased worldwide, especially in Eastern Europe, including Estonia. The majority of people in OECD countries are satisfied with water quality, but in Estonia people are less satisfied with it. They are more satisfied with air quality. Access to green areas like forests or parks differs across Europe. In Turkey and Italy, one out of three people complains about lack of access to green spaces, whereas this problem is not relevant in the Nordic countries.

Subjective well-being

Life satisfaction indicators measure subjective well-being, which shows how people assess their own well-being. Data on life satisfaction are part of official statistics only in few countries (Canada, New Zealand, France and Italy), so international comparisons are limited. The pioneer in the collection of life satisfaction data is Statistics Canada which has been publishing life satisfaction data since 1985. In order to make the indicators part of official statistics also in other countries, the OECD is, together with researchers and statisticians, working on a handbook. It will offer methodological guidance on how to collect and analyze data on subjective well-being. The handbook will be published in 2012. Additionally, Eurostat is developing an ad-hoc module on well-being for the EU-SILC 2013.

Measuring of subjective well-being has often been questioned. The main issue concerning subjective well-being is whether it is possible to ask questions so that everyone understands them the same way and answers according to similar principles. Life satisfaction data should not describe the current emotional state; it should rather be an assessment of a long-term situation. In recent years, scientific methodological analyses have found evidence that information collected with surveys is enough to measure subjective well-being. Firstly, since words like "satisfaction" and "happiness" are often used in questions concerning subjective well-being, people can easily relate to these words and they want to respond to the questions. The response rate is often higher than in the case of surveys measuring objective aspects like income or expenditures. However, life satisfaction cannot be measured without considering the objective indicators that cause the state of satisfaction or dissatisfaction. Secondly, it has been found that people's

answers on life satisfaction vary very little in time, so people do not give answers according to their current emotions. Thirdly, studies have shown that people with different backgrounds understand questions related to happiness and satisfaction in the same way, so data are internationally comparable. The OECD is using two subjective well-being indicators: **life satisfaction and affect balance**. The data sources are Eurobarometer and the Gallup World Poll. Approximately 59% of the population in OECD countries say that they are satisfied with their life. Dutch, Danish and Finnish people are the most satisfied, while in Estonia less than one third are satisfied with their life.

Unlike life satisfaction, which is a general assessment of well-being, affect balance shows how people feel in a certain period of time. It reflects the balance between positive and negative emotions. The majority of people have more positive than negative emotions. Positive emotions dominate for more than 85% of the population in Denmark, Iceland, Japan, Norway and Sweden (Figure 4, p. 36). In Turkey, Hungary, Estonia, Italy and Israel, the share of people who have more positive than negative emotions is less than 70%.

Conclusion

The OECD's aim is not to rank countries, but to try and develop a common understanding of the measuring of well-being, so that people would become more aware of the processes in society. Well-being as a whole can be measured by taking both dimensions, subjective and objective, into account. Subjective well-being is related to the fulfilment of human needs and expectations, which means that an individual himself can assess his well-being the best. Objective well-being refers to the resources available to people. The OECD's report "How's Life?" introduces well-being indicators in eleven different categories. The quality of life indicators of health, education, personal security, subjective well-being, environment, civic engagement and governance, social connections, and work-life balance have been briefly introduced in this article. Though many of the indicators of well-being have been followed for many years already, there are still some shortcomings in the statistics, such as gaps in time series and unreliability of the data. If the goal is to improve people's quality of life, investments have to be made in the production of high-quality data, which will make it possible to measure the quality of life.

To conclude, here is a quote from Angel Gurría, Secretary-General of the OECD: "Statistics on critical aspects of people's lives are important, as what we measure shapes what we, collectively, strive to pursue. But statistics are obviously not enough. They need to be combined with a robust understanding and analysis of how the outcomes that these indicators measure respond to policy interventions."