

## Measuring the Quality of Life

Can human development be measured? Can the quality of life in a country be reliably measured? What about the measures of an individual's quality of life? Is there any adequate formula that can be used to determine how we live?

Numerous parameters can be used to quantify the various dimensions of human development. Human health is one key precondition for a good quality of life and can be evidenced by morbidity, life expectancy data, and data on medical establishments. Health conditions can even be compared internationally based on suitable data. Similarly, the level and the opportunities available in the sector of education can be assessed using figures related to the education system and educational outcomes. Some conditions of the human life, however, cannot be easily quantified because they are of a rather abstract, or of a subjective nature, such as the feeling of freedom, personal safety, respect for the environment, morals, love, and also the capacity for people to develop moral values. *Thus, quality of life means the level of existence that is set up by combining measurable and abstract life values (or also tangible and intangible values), and human development may be perceived as an enlargement of people's opportunities and chances to achieve these values.*

If, due to a variety of reasons, man is unable to attain such values, the quality of life necessarily drops. The lack of opportunities or capacities to develop one's own quality of life has a profound effect on a person. The results of a variety of surveys show that unfulfilled life values are reflected in the most pressing social issues (Table 35).

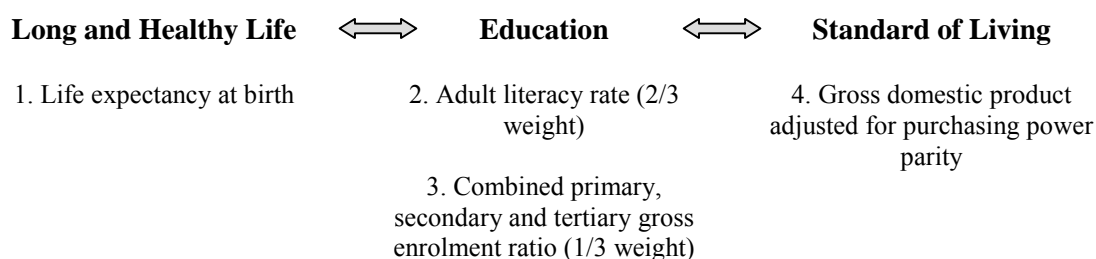
| <b>Life Values Versus Social Problems</b> |   |   |
|---|---|---|
| <b>Value</b>                              | <b>Problem</b>  | <b>Selected Indicators</b>  |
| Family                                    | concerns more or less all following problems  | -   |
| Health                                    | Critical state of the health care sector, low quality of medical services, polluted environment | Life expectancy, health system attainment, emissions of pollutants per capita   |
| Job (employment)                          | Unemployment  | Unemployment rate, long-term unemployment, number of unemployed per job vacancy |
| Standard of living, decent wealth         | Poor financial situation of households, low purchasing power, poverty                           | GDP per capita in purchasing power parity, human poverty index, Gini index      |
| Security                                  | Crime, violence, drugs, xenophobia  | Crimes per 1000 inhabitants, crimes clarified, violent and drug criminality     |
| Housing                                   | Financial unavailability of housing   | Dwellings per 1000 inhabitants, households per dwelling, price of credits       |
| Education                                 | Worsening conditions of the education sector  | Enrolment ratio, literacy rate, Internet connectivity                           |
| Freedom, democracy, moral                 | Political discrepancies, corruption, clientelism  | corruption perception index   |

To measure the quality of life in a satisfactory manner, we would need a parameter that would cover at least the aforementioned dimensions of life. It is evident from the above Table that there are some partial parameters (developed by international and national institutions) that may, if combined, provide interesting data on the conditions of the human development. At the international level, the setting up of such a parameter would be constrained by several factors:

- different hierarchies of values in different countries;
- the problem of assigning importance (weights) to the individual conditions;
- unavailability of, and/or outdated suitable data;
- methodological constraints, etc.

## Measuring Human Development

The Human Development Index (HDI) represents the most comprehensive parameter of the quality of life. The principal idea of HDI is to measure the level of human development achieved by using a simple composite index, and to enable international comparisons of all countries worldwide. HDI provides a picture of human development through parameters of three life dimensions that are generally considered the most important ones.



For the construction of the index, fixed minimum and maximum values have been established for each indicators:

- Life expectancy at birth<sup>1</sup>: 25 years and 85 years;
- Adult literacy rate<sup>2</sup>: 0% and 100%;
- Combined gross enrolment ratio<sup>3</sup>: 0% and 100%;
- Real GDP per capita (PPP\$)<sup>4</sup>: 100 and \$40,000.

**Basic Indicators for HDI Calculation for the Slovak Republic (1999)**

**Table 36**

| Indicators   | Notice | 1999   |
|--|--------|--------|
| Life expectancy at birth                                 | years  | 72.99  |
| Adult literacy rate                                      | %      | 99.00  |
| Combined primary, secondary and tertiary enrolment ratio | %      | 75.03  |
| Real GDP per capita <sup>a</sup>                         | PPP\$  | 10,950 |

*Note:* a. Preliminary data.

*Source:* Statistical Office of the Slovak Republic.

<sup>1</sup> The number of years a new-born infant would live if prevailing patterns of mortality at the time of birth were to stay the same throughout the child's life.

<sup>2</sup> The percentage of people aged 15 and above who can, with understanding, both read and write a short, simple statement on their everyday life.

<sup>3</sup> The number of students enrolled in a level of education, regardless of age, as a percentage of the population of official school age for that level. The combined gross primary, secondary and tertiary enrolment ratio refers to the number of students at all these levels as a percentage of the population of official school age for these levels.

<sup>4</sup> For this purpose, the GDP per capita in local currency is divided by the purchasing power parity (PPP), defined as the number of units of the country's currency required to buy the same amount of goods and services in the domestic market as one dollar would buy in the United States. PPP allows a standard comparison of real price levels between countries. Normal exchange rates may over- or undervalue purchasing power.

HDI values range from 0 to 1. The respective value for a country shows the distance that it has already traveled towards the maximum possible value of 1. The difference between the value achieved by a country and the maximum possible value shows the country's shortfall – how far the country has to go. A challenge for every country is to find ways to reduce its shortfall.

| <b>Table 37</b>   |              |
|---|--------------|
| <b>Partial Indices and the Final HDI for the Slovak Republic (1999)</b> |              |
| Indices   | <b>1999</b>  |
| Life expectancy index   | 0.800        |
| Educational attainment index  | 0.910        |
| Adult literacy index  | 0.990        |
| Gross enrolment index   | 0.750        |
| Adjusted real GDP (PPP\$) index   | 0.784        |
| <b>Human Development Index HDI</b>                                      | <b>0.831</b> |

*Source:* Author's calculations.

In 2000, the Slovak Republic ranked 40th among 174 countries of the world in the international scale of human development compiled by UNDP.<sup>5</sup> In recent years, the final value of the index brought the Slovak Republic rank up to the high levels of human development. Compared to the preceding survey, this indicates an improvement by two places, and placed two Persian Gulf countries, Bahrain and Qatar, behind Slovakia. The relatively high growth of Slovakia's index was mainly due to a growth in the standard of living parameter – per capita GDP. It should be noted that World Bank data used for the most recent scale were calculated for 1998, i.e., prior to the introduction of austerity measures adopted in May 1999 (increased tax burden, deregulation of energy prices and rents, etc.). The growth of this parameter can be expected to be less pronounced in the future, mainly due to a reduction in the purchasing power of Slovakia's population. On the other hand, an interesting phenomenon could be observed in 2000: consumer prices of some important items included in the consumer basket (food, transportation) recorded decreases despite increasing producer costs.<sup>6</sup>

<sup>5</sup> See international comparison of HDI on the cover of the report.

<sup>6</sup> The GDP per capita (PPP) indicator, to a major extent, depends on the composition of the consumer basket selected for the calculation.

Table 38

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**Comparison of EU Candidate Countries from CEE (1997-1998)**


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| HDI Ranking                     | Life Expectancy (years) | Adult Literacy rate (%) | Gross Enrolment ratio (%) | GDP per capita (PPP\$) | HDI Value |
|---------------------------------|-------------------------|-------------------------|---------------------------|------------------------|-----------|
| <b>High human development</b>   |                         |                         |                           |                        |           |
| 29 Slovenia (1998)              | 74.6                    | 99.6                    | 81                        | 14,293                 | 0.861     |
| 33 Slovenia (1997)              | 74.4                    | 99.0                    | 76                        | 11,800                 | 0.845     |
| .....                           |                         |                         |                           |                        |           |
| 34 Czech Rep. (1998)            | 74.1                    | 99.0                    | 74                        | 12,362                 | 0.843     |
| 36 Czech Rep. (1997)            | 73.9                    | 99.0                    | 74                        | 10,510                 | 0.833     |
| .....                           |                         |                         |                           |                        |           |
| 40 Slovakia (1998)              | 73.1                    | 99.0                    | 75                        | 9,699                  | 0.825     |
| 42 Slovakia (1997)              | 73.0                    | 99.0                    | 75                        | 7,910                  | 0.813     |
| .....                           |                         |                         |                           |                        |           |
| 43 Hungary (1998)               | 71.1                    | 99.3                    | 75                        | 10,232                 | 0.817     |
| 47 Hungary (1997)               | 70.9                    | 99.0                    | 74                        | 7,200                  | 0.795     |
| 44 Poland (1998)                | 72.7                    | 99.7                    | 79                        | 7,619                  | 0.814     |
| 44 Poland (1997)                | 72.5                    | 99.0                    | 77                        | 6,520                  | 0.802     |
| .....                           |                         |                         |                           |                        |           |
| 46 Estonia (1998)               | 69.0                    | 99.0                    | 86                        | 7,682                  | 0.801     |
| 54 Estonia (1997)               | 68.7                    | 99.0                    | 81                        | 5,240                  | 0.773     |
| .....                           |                         |                         |                           |                        |           |
| <b>Medium human development</b> |                         |                         |                           |                        |           |
| 49 Croatia (1998)               | 72.8                    | 98.0                    | 69                        | 6,749                  | 0.795     |
| 55 Croatia (1997)               | 72.6                    | 97.7                    | 67                        | 4,895                  | 0.773     |
| .....                           |                         |                         |                           |                        |           |
| 52 Lithuania (1998)             | 70.2                    | 99.5                    | 77                        | 6,436                  | 0.789     |
| 62 Lithuania (1997)             | 69.9                    | 99.0                    | 75                        | 4,220                  | 0.761     |
| .....                           |                         |                         |                           |                        |           |
| 60 Bulgaria (1998)              | 71.3                    | 98.2                    | 73                        | 4,809                  | 0.772     |
| 63 Bulgaria (1997)              | 71.1                    | 98.2                    | 70                        | 4,010                  | 0.758     |
| .....                           |                         |                         |                           |                        |           |
| 63 Latvia (1998)                | 68.7                    | 99.8                    | 75                        | 5,728                  | 0.771     |
| 74 Latvia (1997)                | 68.4                    | 99.0                    | 71                        | 3,940                  | 0.744     |
| 64 Romania (1998)               | 70.2                    | 97.9                    | 70                        | 5,648                  | 0.770     |
| 68 Romania (1997)               | 69.9                    | 97.8                    | 68                        | 4,310                  | 0.752     |

Note: CEE – Central and Eastern Europe.

Source: UNDP: Human Development Report 1999 and 2000.

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Improved human development can be noted in the group of transition countries that aspire to join the European Union (including Croatia). There have been improvements within the context of the parameters studied, which is a positive message that can be sent to EU structures. In particular, the Baltic States experienced an extraordinary shift forward; for the first time in recent history, Estonia ranked among the countries with a high level of human development. Although less pronounced, the Balkan countries of Bulgaria and Romania experienced improvements in particular education and incomes. In assessing the Visegrad 4 countries and Slovenia, it should be noted that the potential for marked improvements is limited by their higher baseline position as well as the fact that only the most developed countries rank higher. Nevertheless, Central European countries tend to overtake the wealthy "oil" countries and the most developed economies of South America.

Slovakia's ranking of third among the countries of the former socialist block (position 2 among the V4 countries) as well as the final ranking of Slovakia on the HDI scale can be assessed positively. The results of the international comparison, however, do not reflect the belief of the population itself. Traditionally, Slovaks assess their situation as well as their future expectations pessimistically, even if their real situation may not worsen. This phenomenon can be traced back through recent years, and prevails regardless of the actual deterioration or improvement of economic and social parameters.<sup>7</sup>

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<sup>7</sup> See, for example: Deván, D.: "People are Convinced That We Will be Worse Off". (*Ludia sú presvedčení, že nám bude horšie*). Sme, Aug 12, 2000; *Opinions (Názory)*. Periodical of the Public Opinion Research Institute at the Statistical Office of the Slovak Republic, 1995-1999.

We need to acknowledge the limitations of HDI and similar measures. They arise from the limited numbers of variables that were studied, various methodological imperfections<sup>8</sup>, and, last but not least, from the limited availability of trustworthy data. Several interesting observations may be evaluated regarding Slovakia:

- Life expectancy in Slovakia is about 4 years less than the average for OECD Member States, with the difference being greater for males. Even so, Slovakia's population lives about 6 years longer than the world average.
- Numbers of students enrolled at schools (from the corresponding age groups of the population) are considerably smaller than numbers for developed countries. This comes mainly from tertiary studies. The percentage of university students from corresponding age groups is only about 2/3 of the level of OECD countries. The Czech Republic and Hungary report comparably poor parameters.
- Slovakia's per capita product is several times smaller compared to most developed economies of the world. Comparable World Bank data indicates that Slovakia's generated gross per capita domestic product is only one-sixth of developed countries, and only one-tenth of the best performing economies. Relating these data to purchasing power (PPP), the difference is only one-third to one-half.

## Measuring Gender (In)Equality

The Human Development Index (HDI) is a summary parameter that does not reflect differences between women and men. In 1995, UNDP came up with the idea to assess human development equality for women and men. The Gender-Related Development Index (GDI) studies the quality of life using the same parameters as HDI – life expectancy, educational attainment, and income – while adjusting the results for gender inequality.

According to UNDP calculations, for every country, the GDI value is lower than that of HDI, meaning that there is not full equality of women and men anywhere in the world.<sup>9</sup> (Gender equality would mean that the values of GDI and HDI are equal.) The Slovak Republic is among the countries which rank higher with respect to GDI than HDI. This may be interpreted that opportunities for a better life are more equally distributed between men and women than in some other countries that achieved a generally higher level of human development.

| <b>Basic Indicators for GDI Calculation for the Slovak Republic (1999)</b> |               |                |              |
|--|---------------|----------------|--------------|
| <b>Indicators</b>  | <b>Notice</b> | <b>Females</b> | <b>Males</b> |
| Life expectancy at birth   | years         | 77.03          | 68.95        |
| Adult literacy rate  | %             | 99.00          | 99.00        |
| Combined primary, secondary and tertiary enrolment ratio                   | %             | 75.83          | 74.38        |
| Real GDP per capita <sup>a</sup>   | PPP\$         | 8,587          | 13,447       |

*Note:* a. Author's calculation based on UNDP methodology. For details, see: UNDP: *Human Development Report 2000*.  
*Source:* Statistical Office of the Slovak Republic.

<sup>8</sup> For example, literacy data in HDI are usually estimates since exact data are collected through national population censuses only every 5 or 10 years. Calculation of a gross enrolment ratio is influenced by study programs (levels) duration differences and the corresponding age groups in different countries; it does not consider grade repetition; etc.

<sup>9</sup> See international comparison of GDI on the cover of the report.

The calculation of the gender-related index is along the same lines as that of the human development index, with partial indices – life expectancy, education and income – being adjusted based on the proportions of men and women in the population. The calculation of the income index is based on the women-to-men wages ratio and their representations among the economically active population.

| <b>Partial Indices and the Final GDI for the Slovak Republic (1999)</b> |  | <b>Table 40</b> |
|---|--|-----------------|
| Indices   |  | <b>1999</b>     |
| Equally distributed life expectancy index                               |  | 0.800           |
| Equally distributed educational attainment index                        |  | 0.910           |
| Equally distributed income index  |  | 0.779           |
| <b>Gender-related Development Index GDI</b>                             |  | <b>0.829</b>    |

*Source:* Author's calculation.

The differences in basic conditions that determine the quality of life of women and men are given mainly by two factors:

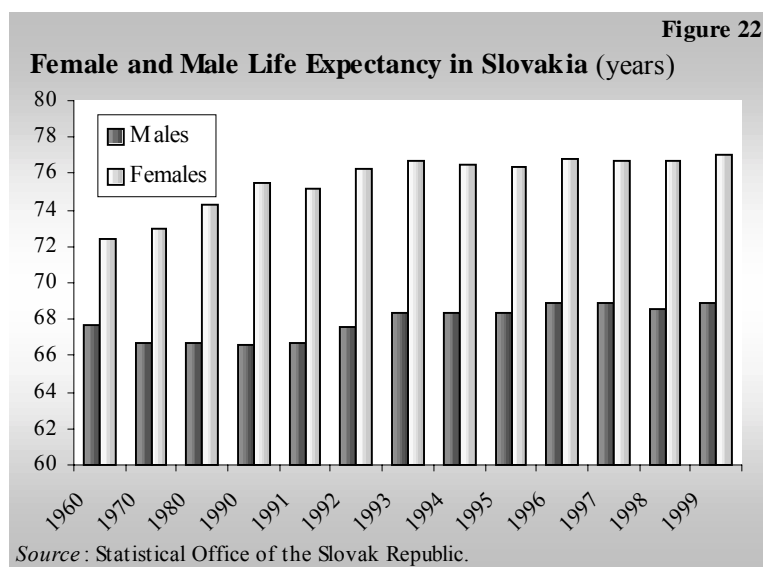
1. *Women tend to live longer than men.*
2. *Men tend to have higher incomes than women.*

The above-mentioned phenomena are universally valid. In addition to these social and biological factors, there are other determinants that affect the quality of life for women and men, such as different access to education and information (this mainly concerns less developed countries), different physical, mental and motivation attributes, combination of maternal and professional duties of women, higher economic activity of men, lower participation of women in socially important positions, etc. What are the underlying reasons for these differences and what are their dimensions in Slovakia?

On average, men in Slovakia live 8 years less than women as shown in Figure 22. This difference shows a long-term tendency to increase, but recently has remained quite stable. A similar phenomenon can be seen in a majority of economically developed countries. Available data shows that men live longer than women, or have the same life expectancy as women, only in Maldives, Nepal and Bangladesh. Relatively small differences (to the benefit of women) exist in other Asian and most of the African countries (e.g., India, Namibia). Thus, longevity differences are smaller in developing countries. Studies have suggested that male mortality decreases with the wealth of the country, slower than that of females. In early 20th century, the life expectancy gap between men and women in wealthier countries was two to three years. By 1999, the difference in the same countries increased to seven or eight years, to the benefit of women. According to the World Health Organization (WHO), the major reason for this development has been *a substantially higher proportion of smokers among males*. This factor may become unimportant in the future since gradually more women are becoming regular smokers. Some studies point to genetic differences in chromosomes that "draw up" a shorter life span for men, as early as in the early stages of fetal development. Other theories are based on the presence of the female hormone estrogen that, unlike the male testosterone, protects women against heart diseases. Another explanation may be a larger muscle mass and a faster metabolism in men that causes a faster cell death rate in the presence of a limited reproduction. Apart from the genetic factors there are also behavioral reasons. Men generally tend to smoke more, to drink more alcohol, to work in more risky and dangerous jobs, play rougher sports, and undergo greater physical risk.<sup>10</sup> According to WHO, additional reasons for the growing gender based life expectancy differences include a more responsible approach to health issues on the

<sup>10</sup> Haddock, R.: *Exactly Why Do Women Live Longer Than Men?* The Nubian Message Online, Feb 2, 1997.

part of women, their healthier diet, and men's gradual reduction of physical activities compared to their predecessors (exercising, active leisure time).<sup>11</sup> Experts direct men to not neglect symptoms of diseases, to seek professional medical assistance in health-related issues, and to eat substantially more fruits and vegetables, i.e., natural sources of so-called antioxidants.<sup>12</sup>



The answer to women's life span being longer than men's life expectancy is most likely a combination of the above as well as unknown factors. Whatever the reasons may be, it can be stated that women have the "biological advantage" of living longer and thus have more opportunities for human development. In general, we may agree with this hypothesis, however, only to the extent to other factors that are not accounted for and which are less favorable for women.

In Slovakia, both women and men share equal opportunities for education. There are study programs showing unbalanced gender proportions, but this fact is attributed to natural selection (e.g., women tend to select humanities, whereas men chose technical disciplines). In principle, the system of education is equally open to women and men at all levels. The combined enrolment ratios are even slightly higher for women, indicating that from the corresponding numbers of girls aged 6 to 22, higher percentage study at schools than it is the case for men.

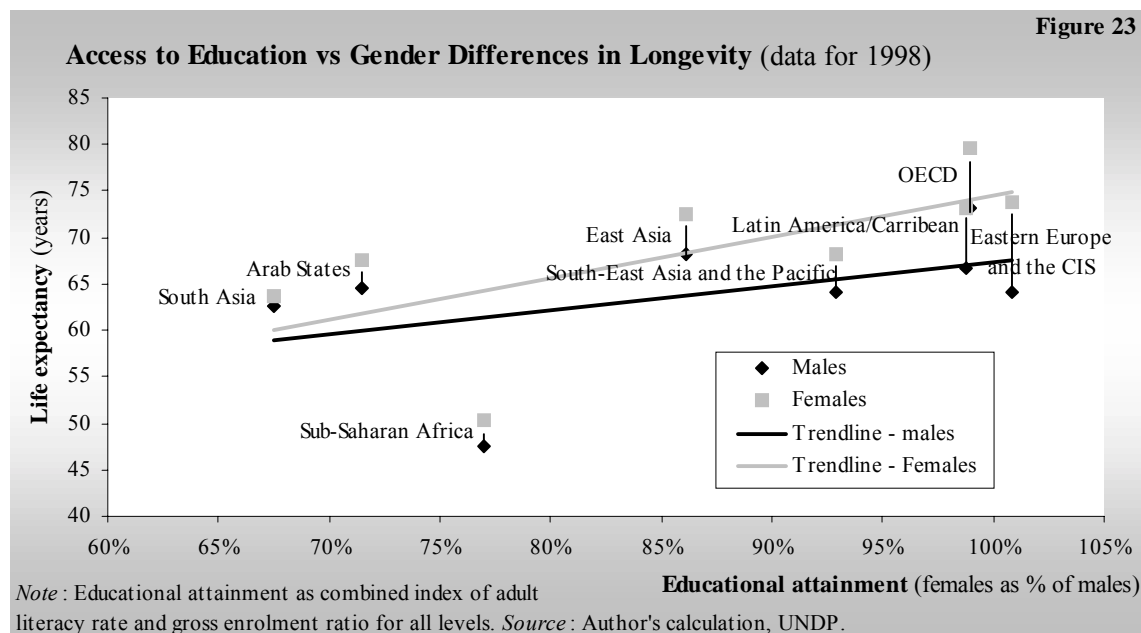
Certainly, there are countries where women's opportunities to study are not equal to those of men. This particularly concerns developing Asian and African countries where women, compared to men, make up a great majority of illiterate populations and have substantially more restricted access to teaching institutions. Statistical data indicate two interesting facts for countries where women have less opportunities for education than men. First, the life expectancies of both genders tend to approach each other. Second, women have a relatively shorter life span than in other countries.<sup>13</sup> It may be assumed that *the worsened access to education and information as compared to men makes the biological advantage of women to live longer lives disappear*. It is difficult to speak of a clear-cut causative relationship – since several other factors such as hierarchy of values, patriarchy, religion, etc. are also part of the game. Yet, there is an evident relationship between these phenomena (see Figure 23).

<sup>11</sup> Source: <http://www.who.org>

<sup>12</sup> Antioxidants have the ability to reduce the process of aging by combating fragments of free oxygen in the human body.

<sup>13</sup> Countries with a markedly higher level of education in men are e.g., India, Yemen, Bangladesh, Pakistan, Nepal, Togo, Morocco, Guinea. The life expectancy differences in these countries are minimal. This may mislead to the conclusion that men are living healthier in the above mentioned regions than in developed countries. This is denied by data on their generally shorter life expectancy.

Figure 23



Perhaps the most marked gender inequality is with the labor market, specifically concerning income. With smaller or larger deviations, women in any country get lower remuneration for their work. According to the most recent data available, Slovak women earn on average only 75 percent of what men earn. This data may be paraphrased to say that women in Slovakia work for nothing for the first three months in a year, and start earning for their work only in April.<sup>14</sup>

There are equal conditions in the education market, but inequalities and/or discrimination against women when it comes to the labor market. How can we explain the fact that women have the same level of education as men, but their income is less? A portion of this difference is accounted for by structural factors in the labor market that appear as objective and known reasons for the income differences. One of the factors mentioned is the fact that women are employed prevalently in sectors that show the lowest average wages (education, health care, social services, etc.). However, sociologists ask whether the low pay in those sectors is the reason or the consequence of feminization (for details, see *Gender Differences in the Labor Market*). It is worth mentioning that women dominated sectors are key for long-term human development. A similar phenomenon can be observed within identical employment groups, with women filling lower ranking positions and thus paid worse. The slightly higher educational level of the active male population appears to be an objective reason for the income differences between the genders. In building their careers, women are limited by motherhood, thus slowing down their promotion to better positions. On the other hand, men are prevented from quickly achieving higher positions because of mandatory postgraduate service in the armed forces.

Even if the aforementioned factors were to be disregarded, a portion of the gender pay gap would still exist. It may be speculated that the reason is a combination of cultural, social and psychological influences whose deep roots may be looked for in the traditional, accepted perception of the roles of men and women in the family and the society. The belief prevails that it is generally men that have responsibility to provide for the material subsistence of the household, whose decisions weigh more, and who are better leaders and are able to more efficiently cope with a variety of situations. This idea is nourished by the society, including its female portion. Then, the "stronger gender (men) – weaker gender (women)" constellation becomes reflected in the very selection of the occupation and in financial requirements in relation to the job. "The need" for a higher pay for men is similarly perceived and accounted for

<sup>14</sup> According to the author's calculation, the "pay equity" day for 2000 is March 30 (data of the Statistical Office of the SR for the 1999 female/male wage ratio of 75 percent was used).



by employers who are men in a majority of cases. In contrast, women tend to be willing to accept less pay, to have lower career aspirations, and less resolution to achieve higher and hence better paid positions. There is also the perception of men's readiness to take responsibility, even by women themselves (women frequently are prone to believe that it is men who should be the boss<sup>15</sup>). The biological ability of women to bring children into the world serves to complete the image of a "finer" gender and is one of the reasons for their disadvantageous position in the labor market. The difference in pay reflects the perception of women's social status that is inclined toward the traditional understanding of a woman, above all, as a mother.

The private sector provides a greater space for this kind of relationship because the system of remuneration is looser and not linked to the individual wage tariffs as it is the case in the public sector. These aforementioned connections are not only reflected in the labor market (though they are most visible there), but also in other areas of social life, such as politics and administration of State. UNDP constructed the Gender Empowerment Measure (GEM) to measure the relative empowerment of women and men in political and economic areas.

GEM comprises four variables. The first two variables reflect economic participation and decision-making power: women and men's shares of administrative and managerial positions, and their shares of professional and technical jobs. The third variable, women and men's percentage shares of parliamentary seats, reflects political participation and decision-making power. The last variable, GDP per capita, is used to reflect power over economic resources.<sup>16</sup> In the most recent GEM comparison, Slovakia ranks 28th among the assessed 70 countries of the world. This position made the Slovak Republic rank higher than several more developed countries (such as Japan, Greece or Italy), however, at the same time lower than Venezuela, Latvia or Trinidad and Tobago, i.e. countries ranking behind Slovakia in the average levels of human development. The reason for such a "two-type" assessment of Slovakia has mainly been the weaker representation of women in political decision-making and managerial positions. Traditionally, it was Nordic countries that achieved the best position in international comparison of gender equality, when the first five tiers were taken by Norway, Iceland, Sweden, Denmark and Finland.

Some countries have attempted to resolve the unequal or even discriminatory status of women by so-called *positive discrimination* (affirmative action), e.g., by introducing quotas for the filling of jobs or influential positions by women. Those attempts have shown controversial outcomes. Besides quite clear pros associated with mainly a reduction in poverty of women and elimination of prejudices, these measures brought in a new wave of discrimination and aversion that has proven to be a detriment to the most skilled and qualified women. It should be therefore considered whether similar artificial measures are actually a suitable form to eliminate inequalities. Gender equality – not only in the labor market or with respect to political decision-making, but above all with the family – must be perceived as a natural component of human existence. It would be an illusion to believe that relationships that have been forming for historically long periods of time can be rapidly changed. Therefore, measures to support gender equality in our environment should be directed mainly toward the education and training sector where children and young people can be educated in the value of equality.

## How to Improve Life Quality Measures?

It has been mentioned in the introduction to this section that to be able to measure the quality of life more comprehensively, we should use data from a variety of human life areas to construct a single parameter. The input data should represent the most important values of the human existence (health, education, standard of living, work, housing, etc.). The significance of any parameter is given by its comparability, e.g., from geographical or time aspect. Such a summary

<sup>15</sup> Teliščáková, D.: "Rights and Responsibility". ("Práva a zodpovednosť"). Pravda, March 4, 2000.

<sup>16</sup> For details on GEM methodology, see e.g., UNDP: Human Development Report 2000.

index could probably only serve the purposes of regional-based comparisons of regions or smaller territories of Slovakia (provided that such data are available). Several relevant data on the conditions of our country are not monitored at all. Some data are only monitored nationwide. Others lack the gender dimension, are only collected at irregular intervals, or only once within a certain period of time (such as the census). The implementation of the Public Administration reform and, in particular stabilization of the territorial division of the country, can be expected to give impetus for improvement. Valuable data are expected from the census in 2001. *A regional life quality index could become an adequate tool to monitor the status quo and the future development of regions.*

International comparisons need a simple indicator comprising comparable and – mainly – available data. The human development index HDI, as well as the gender-related index GDI, may be the most appropriate current parameter. This parameter reflects three principal attributes of life: longevity, education, and standard of living. The HDI methodology continues to develop and offers opportunities for improvement in the existing parameters and in the additions of new ones (after having accounted for all the requirements mentioned, including relevance, availability, comparability, and simplicity of calculations). Our suggestions to improve HDI and/or GDI focus on both existing and new groups of variables.

## A. Existing Variables

### 1. Life Expectancy

Within the human development index, life expectancy addresses the opportunity to live a long and healthy life. During a person's life, some non-negligible periods of time is spent in a variety of states that may be referred to as disability (illness, disease, etc.). The calculation of life expectancy (used by both HDI and GDI) is based on the overall life span based on mortality data. The WHO set up a new indicator of the life span, the so-called *disability-adjusted life expectancy* (DALE). The simplest definition of DALE is a healthy life expectancy, a life lived in full health.<sup>17</sup> DALE summarizes the expected number of years to be lived in what might be termed the equivalent of "full health". To calculate DALE, the years of ill-health are weighted according to severity and subtracted from the expected overall life expectancy to give the equivalent years of healthy life. DALE data are available for all countries for which the HDI is calculated, including their gender dimension. Even if the replacement of the "conventional" life expectancy by healthy life expectancy does not cause significant changes in the HDI ranking, it would *more truly reflect the nature of human development.*

WHO rankings show that the number of years lost to disability are substantially higher in poorer countries because of many limitations, including injury, blindness, paralysis, tuberculosis, mental effects of several tropical diseases such as malaria, and the obvious HIV/AIDS epidemic. People in the healthiest regions lose some 9 percent of their lives to disability, versus 14 percent in the least healthy countries.<sup>18</sup> When using DALE, this fact may lead to a relative deterioration of HDI rankings for developing countries.

### 2. Literacy Rate

Within the measures of human development, the adult literacy rate represents the level of educational attainment (two-thirds weight in the HDI). In the majority of developed countries, this indicator functions basically as a constant coefficient being close to 1. There are several definitions and different levels of literacy; e.g., the International Adult Literacy Survey introduced five levels of the so-called functional literacy.<sup>19</sup> A part of the "literacy weight" in the

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<sup>17</sup> WHO: The World Health Report 2000 Health Systems: Improving Performance. <http://www.who.org>

<sup>18</sup> For the calculation of the life expectancy index, minimum and maximum values would have to be changed accordingly (e.g., 20 and 77.5 years).

<sup>19</sup> UNDP uses the first level of this literacy scale for the calculation of the Human Poverty Index for OECD countries (HPI-2). Functional literacy means more than just the ability to read and write. Most of the tasks at this level require

HDI could be overtaken by functional literacy, which more precisely reflects the level of use of acquired abilities in reading and writing. Certainly, this would require identical surveys in all involved countries. That would be difficult, especially for the least developed countries with high levels of general illiteracy.

Nowadays, terms like information and computer literacy are becoming more and more frequent and are expected to soon replace the "literacy of reading and writing". The availability of information technologies, as the precondition of its use, is gaining vigorous importance among human development indicators. Data on the numbers of personal computers and Internet hosts are available (despite some shortcomings) and could very soon replace a part of the "literacy weight" in the HDI computation.

## B. New Variables

### 1. Unemployment Rate

If education is considered the principal tool to improve the quality of life, then one should add that the most efficient form of utilizing the acquired skills and qualifications is employment. To achieve a decent standard of living, one of the basic dimensions of human development, the majority of the population needs to work and earn an income. As mentioned in this report, the unemployed belong in the group at highest risk of poverty. Unemployment, at the same time, is one of the most pressing social problems, considered very sensitively by each and every individual. Though it is true that unemployment affects mostly the productive part of the population, this phenomenon also indirectly interferes with the pre- and post-productive population. For example, children in families where one or both parents are jobless have less opportunity for development. Higher rates of unemployment also decrease the volume of public sources for the valorization of old-age pensions (tax burden grows, pressure on unemployment benefits raises). Unemployment affects the quality of life of the entire society.

Including labor market indicators in the human development index would raise the value of the measure. Employment could capture a part of the income index, and/or a new *standard of living index* could be created (e.g., 2/3 weight for GDP per capita in PPP\$ and 1/3 weight for employment).<sup>20</sup> Data on unemployment are available for almost all countries examined within the HDI.

Naturally, the composition and methodology of international indices cannot be subject to permanent changes. However, some adjustments (e.g., the use of disability-adjusted life expectancy in the HDI calculation) would not dramatically intervene in the methodology and would significantly raise the quality of these complex human development indicators.

Last year's National Report stated that the feeling of a meaningful and happy life comes from the favorable action of the external environment on the development of human choices and the ability of people to develop these choices in accordance with their needs and interests. This condition cannot be exactly measured and compared because it appears in countless forms and each individual may perceive it differently. It is very likely that the chances of well being grow when people enjoy more opportunities to fulfill their life values (see Table 35). It is the increase of human choices and opportunities on which the human development measures are focused. It is not a self-meaningful measurement or comparison of country rankings. The mission is, through the achieved level of development, to point to both positive and negative aspects. The

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the reader to locate a certain information in the text. Example: Use the instructions on the bottle to identify the maximum duration recommended for taking aspirin.

<sup>20</sup> For the calculation of the adjusted HDI, the "employment rate" could be used. The parameter would reflect the gap between the theoretical maximum of full employment (100%) and the average annual unemployment rate of the respective country.

mission is also directed at solving problems in society and in the individual, which hinder human development.

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